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AN AMERICAN BOYS' SCHOOL—WHAT IT SHOULD BE.

I HAVE been asked to write an article on a great American school, I suppose because I have spent most of my life in school work and because whatever I know about schools is rather a matter of experience than of theory. It would be bad taste to enlarge on one's own work, and too much in the way of glorifying one's self, unless indeed I owned to manifold mistakes and failures, and acknowledged (what would be the simple truth) that what I have seen accomplished as the result of my own plans and labors is inexpressibly below my aims and ideals. Perhaps, therefore, the best course to take will be to allow the imagination a little scope and to portray what a great American school, such as one longs to see, ought to be—what, at least, those who are engaged in educational work ought to aim at; and certainly a high aim is better than a low one, and it is a help to our human weakness to keep before us the noblest ideal.

In what I am about to say, I am sure of the sympathy and concurrence of loyal, disinterested, high-minded Christian men engaged in the same work. We are all one, and our work is one, and we enter into no rivalry or vulgar competition with one another. We have essentially the same end, and we wish one another God-speed, not only in newspapers and on public occasions, but in our secret hearts and in our haunts of retirement. True men, who are not seeking selfish interests or personal κῦδος, have no thought or wish to increase by the losses or discomfiture of their brethren. The work in which they are engaged is of the highest, and they gladly recognize their fellow

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workers, and desire to have part in no other provocation than "to love and good works."

We have a great system of common schools throughout the country, which engage the attention and interest—I may add, which awaken the anxiety—of large-hearted, thoughtful Americans; but my subject is apart from these. I am concerned with such schools only as belong to the secondary class, which are preparatory to a university course, whether classical or scientific, and which profess also to give to boys who are designed for business, such beginning of sound mental training and knowledge of letters that they need not be classed hereafter with the uninformed and illiterate. The school is American in the strictest sense of the word, on American soil, under American institutions, for American needs, and not an imitation, however good, of what cannot be reproduced on this side of the Atlantic—a great English public school. We cannot have Rugby, or Eton, or Harrow here, if we would. And certainly no one who understands our society, and the special character of our civilization, would wish for such transplanting. This is not saying that we are above learning from England, or Germany, or any other nation, what is best in its educational work, or that we are starting out for ourselves regardless of the rich harvests of the past. Our danger as a nation is from self-confidence and satisfaction in beginnings which are at best only a promise and foundation for the future. But neither the great English public school nor the German gymnasium would suit us here. We have our own conditions to meet and provide for, which belong to ourselves as Americans, as well as those which are common to men in every country, age, and generation.

The ideal is one not easy of attainment, and there are opposing forces at work in our American social life, which make it peculiarly difficult. Average human nature must be surmounted and directed in every age, if we would reach a high standard of excellence, whether intellectual or moral; but we have our own special barriers and drawbacks, and these will be briefly indicated as I go on.

We want first to make *men*. Such schools as I have in mind take charge of the daily life of the boys committed to them, of their sleeping, eating, arrangement of hours for study and exercise, and are therefore, in a certain degree, responsible for their physical well-being. The *sanum corpus*, if not the most important, is certainly the first object, and this head comprises most of the details of mere living—the simple, yet generous and varied diet, the sufficiency of rest and recreation,

the careful provision for bathing, and for fresh air and well-distributed light, in the rooms occupied by the boys, as well as such special arrangements as are required by our variable climate with its extremes of heat and cold. Our boys are the men of the future. They must have bodily health and vigor to begin with, and all their physical powers unimpaired and in good working order. For men should be manly, and while a puny, delicate man may have the truest manliness and a burly, self-indulgent animal of the same genus have little or none, a sound, healthy body in a boy goes far to insure his manliness and freedom from the tendency to abnormal precocious vice. Great care will be taken, therefore, to encourage and cultivate such exercises as are instrumental in producing a sound body. The playing fields, ball courts, tennis grounds, and gymnasium will receive the same attention and oversight as the school-room. The severity of the winter, the wet cheerlessness of the early spring, will be mitigated by an ample provision for exercise under reasonable shelter. The authorities of the school will aim so to strengthen and develop a boy's physique that he will not easily take cold, or suffer from a little exposure, or notice a trifling discomfort, or be subject to the sick headaches which are usually the penalty of an overloaded stomach.

There is a great furore for competitive games at present throughout the country, and this creates an exaggerated and undue interest in their results. Whatever the example set by some of our young collegians, the ideal school will hold in check this monopoly of youthful energy. There will be great caution in allowing contests with athletic clubs from other schools. No set of boys will be permitted to quit their work in term-time to play match-games in other places away from the school. Whatever introduces a professional element or incites betting will be discountenanced and repressed. In a large school it is quite possible to organize clubs sufficient to create and sustain the interest which comes from a healthy competition. What the prevailing games are is a matter of less account, provided there is reasonableness in their management, and all forms of cheating and loud coarseness are discouraged, and good temper and perfect fairness preside. Some games, however, have better associations than others. In the writer's judgment and experience, cricket is the best game to encourage in such a school as I am imagining. In itself it is no more English than it is American. When Americans play it, it becomes an American game, just as golden rod, if adopted by general consent, would become the national flower, although it grows freely in certain parts of Great

Britain. The educational results of cricket are better than of most other games in promoting those moral qualities which belong to a right notion of manliness. But details of this sort may be safely left to the responsible heads of the school, who will be wisely indifferent to the means used, if the desired end is reached, and the play-ground becomes a spring of healthy animal life as well as an out-of-doors training in noble manners. Nothing is to be slighted in the discipline of boyhood; and those who are rude and evil-speaking, mean and tricky, in their sports, will be sure to show the same traits elsewhere, both at school and at home. It is a great gain for any boy to learn early to bear defeat gracefully, and to scorn an advantage won by the sacrifice of truth, courtesy, and honor.

Along with this subject comes the necessity of contending with the self-indulgence of our day, a necessity sure to make the school and its authorities unpopular with a large class of the community. For the fathers as well as the mothers do, very many of them, think that love is best shown by feeding, that their sons should have no stint of sweets and other gratifications of the palate, and that their pockets should be well lined with spending money, so that they may be enabled, by the aid of the confectioner and his fellows, to support the hardships of school-life. One of the greatest practical difficulties in the way of securing a high-bred manliness among our boys will arise from this vital mistake of parents whose own habits are undisciplined, and who little realize that thus to pamper and indulge the animal nature is to weaken the will-power of their offspring for moral ends, and to sow seed of which the ripened harvest is the incapacity of resisting any inordinate desire. Never let it be forgotten that there can be no manliness worth the name until the boy learns to say a strong "no" to himself and his own propensities, as well as to the lawless solicitations of self-indulgent, unprincipled companions. Whatever we do for mental training and equipment, our work is a failure in proportion as our boys fail in the attainment of these first principles of a healthy manliness.

But a school is mainly occupied with the preparation and training of the mental powers. These must be exercised, instructed, developed. "*Doce, disce, aut discede.*" "The studies pursued, the methods of teaching, the regulations adopted, are chiefly valuable in so far as they tend to produce certain habits," in so far as they are instrumental in the discipline of memory, reason, imagination, and the perceptive faculties. Not one youth in ten thousand will turn out an Admirable

Crichton, and this is not to be regretted; but ninety-nine in a hundred can be made intelligent men with an appreciation of knowledge, a lively sense of their own ignorance, and the purpose to do something themselves to lessen it. The exercise of the memory has been unduly disparaged. There has been a great reaction from the old system of learning by rote and making memory the essential factor in scholastic success; but on the other hand a well-trained, accurate memory is almost indispensable to the acquisition of knowledge, and there is a good deal of cant in much that is said and written about the cultivation of the perceptive and reasoning powers. A child must receive most of his rudimentary instruction on trust. The main point is to give him the best and most available formulæ, the clearest and most definite rules and principles, to exercise a wise discretion in the first processes of education, and to form those habits of attention and accuracy without which the work of the teacher, at any period of school-life, will be practically abortive. We cannot improve upon Quintilian's precept, "*Non ut intelligere possit, sed ne omnino non intelligere non possit, curandum.*" It is not only necessary that the child shall understand, but that it shall not be possible for him not to understand.

Our danger at present seems to arise from an over-estimate of the youthful capacity and a consequent multiplication of the subjects pursued. Our best colleges and scientific schools are continually raising their standards of admission. The preparation for the Freshman class covers a wider range of subjects and becomes increasingly technical, and this leads to a corresponding enlargement of the school course, and to some risk of cramming, and to an arbitrary limitation in boys' minds of what it is worth while to attain in a particular branch of study. The average boy cannot pursue eight or ten different studies at the same time with advantage. The effort to cover so much ground tends, in the majority of cases, to superficial scholarship and to making the college examination the final end of the school work. The highly accomplished, enthusiastic, inspiring teacher is rare. The art of imparting knowledge is a gift as well as an art. We cannot make the exceptionally able teacher and the exceptionally bright and recipient scholar our standards of comparison, any more than we can exact from our serviceable carriage-horses the time and action of a famous racer. Language and mathematics are the two great means of mental discipline, as much so now as in the days of Bacon. No boy will be less fitted for scientific research, will be a less able electrician or civil engineer, because he is a good Latin scholar and well-trained

in the reasoning processes of plane geometry. It is a popular error that "all things are to be learned at once; not first one thing, then another; not one well, but many badly." The boys sent to such a school as we are aiming at will, most of them, be imperfectly trained in the rudiments of English, will seldom read or spell correctly, will have but a smattering of geography, little or no history, perhaps a small stock of nursery French, but no acquaintance with the great names of English literature, will know more of the writings of Jules Verne than of Walter Scott, and yet will be bright and well disposed enough to accomplish a fair amount of good work, if wisely and kindly dealt with, and if patience and judgment are used in their guidance.

There is so much which can barely be indicated in the compass of an article like this, that in treating of scholarship I will limit myself to two points: the end proposed, and the methods taken. The end is the culture of the intellect. The fallacy which underlies most popular talk about education assumes that utility is the end, meaning by "utility" what helps to prepare one for some temporal calling, some art or business, profession or work, directly resulting from the studies pursued; and we must be prepared in advocating a given study to make clear this connection. Now, in our ideal school, the cultivation of the intellect is itself the end, and nothing is accounted more practical than to "impart vigor, beauty, and grasp to the intellectual portion of our nature." This settles the question as to the value of what are called classical studies. These become unpopular in an age the drift of which is materialistic, and in a society whose tendency is to make wealth the *summum bonum*, and to disparage pursuits which do not lead directly to its accumulation. But those who aspire to teach should have a wider range of mental vision than their pupils. It is not worth while to discuss the value of the Greek language as a means of intellectual culture with a man who has never read a line of Homer. "Thought and speech are inseparable." We mean by "letters" or "literature" the expression of thought in language, and by "thought" is meant "the ideas, feelings, views, reasonings, and other operations of the human mind." It is a mistake to suppose that botany or biology is an eminently practical study, and certainly exclusive devotion to such a study may incapacitate one for what is of all things most practical, namely, historical reasoning. For when one faculty of the mind is inordinately used and developed, the result is very like the excessive development of some member or organ of the body. In a school we aim at the orderly harmonious development of all the mental powers. After a

boy has mastered the initial difficulties of reading and writing in his own language, the range and direction of his future studies will depend upon this effort to train and discipline the intellect. The result of such training under favorable circumstances will prepare him to "fill any post with credit, and to master any subject with facility."

As to methods, these will vary with teachers. Mr. Thring lays great stress upon "articulation," but none too much, if it is to be made impossible for the child not to understand. Attention and accuracy are the essentials of any successful method. The constant effort to secure these will govern the arrangement of hours, the length and succession of lessons, and manifold other details. A master's freedom from selfish vanity, his perfect fairness, simple truthfulness, and unaffected kindness will secure the confidence of his boys, and he will claim to lead and instruct them rather as being somewhat in advance of themselves, and not as being *ex officio* master of the whole range of human knowledge. The *ethos* of the class-room will go far to determine the *ethos* of the school. As a minor point the management of the voice should not be overlooked. A harsh, shrill, or muffled tone of voice is trying to young as to older hearers. Drawling, muttering, habitual colloquialisms, are to be greatly avoided. The teacher belongs to the educated class, and should not speak in the speech of this or that city or provincial town.

I have said the school is American and to train American citizens. This means that our boys should grow up with a loyal devotion to their native land, an intelligent interest in its geography, history, and resources, and a great idea of the noble possibilities before us. It implies the inculcation of their responsibility and obligations as Americans, which cannot be neglected and ignored without moral failure. It should be set before a boy as a paramount duty, to serve his country and advance its highest welfare, not by an arrogant assertion of its superiority in all companies and places, but by the settled purpose to become a worthy example of what an American should be, whose patent of nobility, whatever his social claims, comes first from his manhood and his character. The follies of some of our countrymen abroad should kindle in the better educated among us the strenuous purpose to shun similar mistakes, and to honor our country by modest self-possession and avoidance of ostentatious expenditure. Our school will be American, above all, in its spirit, in refusing to worship wealth and to be dazzled by display, in awarding its honors to the diligent and the deserving, and in respecting the obsolete virtues

of frugality and plain living. The habit of loyalty—of loyal thought, and speech; and action—is a great blessing to a boy, and it is essential to the formation of that most beautiful of all things, the character of a true gentleman.

The majority of right-minded parents are more anxious that their boys should be gentlemen than scholars or successful business men. Assuredly it will be uppermost in the minds of those who direct our ideal school that the throng of unripened youth intrusted to their care should find in the associations of the place that which will

> "Subdue them somewhat to that gentleness
> Which, when it weds with manhood, makes a man."

The discipline of the school will be largely influenced by this idea: to deal with all the boys as if they were or were meant to be gentlemen; to take their word until in any case they are found untrustworthy; to countenance no espionage, no underhand method of detecting the authors of disorder; so to govern by the law of truth that the most deceitful may be shamed into speaking and doing it. Nothing should be more sternly repressed than cheating in the preparation of lessons and in written examinations. The public opinion among boys is apt to be very lax in these matters, but you can never make a true gentleman out of a boy who habitually cheats in his classes and in the schoolroom. It is, perhaps, the greatest trial in this work to maintain even-handed justice, to treat the coarse-minded, dishonorable boy whom you know to be such, with perfect fairness and consideration; to say and do nothing rude or unkind, although in the youthful company around you many are without refinement of feeling, and return your forbearance with ingratitude. The men who have these arduous duties in hand must be themselves gentlemen, not only in outward seeming, but in grain, in their instincts and habits, in the power of self-repression and self-control.

If it is almost a true definition of a gentleman that he is one who never inflicts pain, then we shall have our hands full in the endeavor to instill into our thoughtless, self-indulgent charge a delicate consideration for the feelings of others, the grace of invariable courtesy to women, the habits of self-forgetfulness, respect for age, regard for another's rights, and tender care for the feeble and helpless and for the brute creation. This is in our ideal, and if those who share in the work of the school illustrate in some degree the character portrayed, many of their boys will reflect their tone, and not only will help to keep down the base among them but also will learn

> "High thought, and amiable words,
> And courtliness, and the desire of fame,
> And love of truth, and all that makes a man."

For, after all, character is of infinitely greater account than acquirements, and our school aims at forming or helping to form strong and noble characters. How can this end be best reached? Certainly no one, young or old, can be called good who disobeys his conscience, and goodness is better than greatness if greatness is merely the power to hold the mastery of one's fellows. Goodness often *is* greatness, and the "first principle of a man's ethical life is to reverence his conscience as his king." There is an absolute standard of Right and Wrong which rules the universe, and to this the conscience in every child bears witness. And the training of conscience is the highest part of education, a training which is twofold: subjective, by keeping the springs of action clear of evil habits and influences from without which pervert and blind the moral sense; and objective, by bringing the "Light which lighteth every man" as near the boy's heart as we can, until duty rules him, and "every pulse beats true to airs divine." How is this end to be accomplished in view of the wide-spreading imperfection of our home life, the tremendous disorganizing force of early self-indulgence, and the inversion of the true objects of life which a child is quick to discover in those around him before he can draw all the baneful inferences which such examples suggest?

The fact of religious teaching in our school is taken for granted. It is needless to say that this should never be proclaimed as one of the advantages of the place, as a species of advertisement or recommendation. The life of a great school is like the life of an individual. What is best and most precious shuns publicity, and is harmed and degraded by notoriety. There is less temptation, perhaps, to profess a religious motive nowadays, when many a father who may send his boy to such a school has lost his own faith as a Christian, supposing he ever had any to lose, or if he has not lost it altogether is still grievously affected by the tone of much popular literature, and is inclined to think that Christianity is somehow on its trial, and that the Book in which his mother sought the light and consolations of Heaven has been found out, so to speak, in these days of unchartered criticism, and deposed from its authority over human thought and conduct.

We have nothing to do here with religious controversy, and our point is not to prove what has been proven a thousand times, or to refute what has been a thousand times refuted. We are faced with

the great question, how to lead our boys to obey conscience and to put their duty uppermost, feeling that whenever this is achieved the best issue of all is reached, and that *finis coronabit opus*.

There are two effective instruments at hand in our school to be used for this end: personal influence, and law. The influence of the living teacher, enforcing by example and every persuasive tender art the truth to be inculcated, is essential in the first place. Didactics is all but worthless with average human beings. Witness the fruitlessness of much well-meant and fairly good preaching. The mere tone of the voice, the expressive look, the loving pressure of the hand, if these reveal a heart deeply convinced of that truth of faith or duty which one longs to impress upon his charge, will do more for good than lectures, however forcible, or those commonplaces of morals which no one would dispute or deny. Simple, unfeigned goodness and the "confidence of a certain faith" upon which it is founded are the mainsprings of a healthy, uplifting, personal influence. The very air a boy breathes in such a place should be helpful from the absence of profane and vicious elements, and the concurrence, more or less manifest, of all who have a right to be listened to and obeyed. This is sufficient under this head, and indicates the multitude of "humble cares and delicate fears" which will make up the daily life of teachers who realize their responsibility and are earnestly set to fulfil it.

Nothing can be begun without influence, and surely nothing can be completed without law. Influence is needed and desirable in order to bring about the willing recognition of law—of submission and obedience to the highest authority. This makes every detail of school-life important as helping to form habits, the habits which find their strength, as years increase and reason develops, in the faith which we call the Christian faith, and in Him who is its Author and Finisher.

I have arrived at the *raison d'être* of such a school as this loved country of ours, with its widely various social life and the numerous elements of menace and disintegration fermenting within it, seems to me to require. Practical men, so-called, if any such glance over these roughly-drawn outlines, may smile at an ideal of which they see no visible illustration, and think it "too good for human nature's daily food," and that a lower aim is wiser, as easier to reach, and not wasting energy and efforts which are sure to be defeated. But,

> "Many a time
> Victor from vanquished issues at the last,
> And overthrows from being overthrown,"

and there is a true parallel here between the life of a school and the life of a man. The highest standard of right and wrong is the only befitting one for a very imperfect human being to make his own. "*Sic itur ad astra*," and only so. Whoever takes in hand this great work of education must take it in all its parts and with all its overwhelming responsibilities. The whole man is made up of body, soul, and spirit, and that education is mutilated and inadequate which takes no notice of one part—and that the most important part—of our threefold nature. I will sum up in another's words what my own experience of many years has more and more assured me and verified, what this American nation needs above all things to learn, and what it should be the ardent desire and effort of those who bear the honored name of teachers to set forth and apply.

"You may, indeed, offer an education without a religious creed, and you may offer all the material of knowledge, but without a creed you have not the natural recipient of education. Religion gives the power of receiving education; it provides that seriousness and weight in the young mind, which knows how to lay hold of the resources to the enjoyment of which it is admitted. . . . In works of fiction there is a moment which makes the character; the creator of the work of art who wields all the resources of moral description, of sentiment and imagery, may have striven with his idea in vain; he buffets the air with words, and loads the ground of the drama with structures of scenes or conversations, but for all that the character is not yet drawn, and he has that in his mind which is not expressed. His effort is to strike it out, and to shape it, and it will not come into shape; but a moment brings it out, and the person stands before you. That ideal in the world of school creation is the Creed. At once a school becomes something else; something it gains of an end above nature, of a supernatural end of its own work. The rank of all work is raised, and the scholar is raised with his work. The school belongs to the ages that are past, and is part of the chain of forts and defences of Christianity."

HENRY A. COIT.

IDEALS OF THE NEW AMERICAN UNIVERSITY.

WHAT advantages have the builders of a new University over those who direct the older schools in America? In what way can the freedom which comes with newness compensate for the lack of history and traditions and of the hopes and affections which cling wherever students have made their homes?

In attempting to answer this question, I have assumed that the new school has the ample financial support with which it can justify the name of University, that its environment is not uncongenial, and that its growth is to be checked by no hampering restrictions. I recognize fully that the essential element in the strength of the University lies in the character of the teachers who compose it, a matter independent of the number of years during which the corporation has existed. Great men make great schools, whether they be old or new.

I recognize also that an institution of learning, whatever its scope or its purpose, must be a growth and not a creation. To establish a University fully equipped and fully organized before a student has entered its doors, is to develop it without close relation to the work it has to do. There must be many changes to make, and many steps must be retraced before it can take its place in the educational system.

On the other hand, it is not necessary that a school should be ancient in order to gain the wisdom of age. Each generation is heir to all previous experiences. In the new University the period of infancy and growth may be materially shortened. The ends to be attained are comparatively near and clearly defined, and little time and strength need be spent in tentative experiments.

In the growth of a school there is the closest analogy to the life history of an animal. Its whole story is recorded in its internal structure. The record of its various surroundings, its various needs, through the long period of its development, are carried with it after needs and environment have wholly changed. The law of heredity, and its analogue, the force of custom, make these repetitions a necessity. In the school as in the animal, the outworn parts of the organism are interesting to the embryologist or the historian, but they serve

no useful purpose to the organism itself. Their preservation is a loss of strength, their formation a loss of time, and advance in the scale of being depends on the saving of force and time.

Dropping the biological analogy, we may say that the new school can go at once to its own work, with such organization only as its own work requires. It is not bound to repeat in its growth the structural history of the American College, nor of the English original from which the American College derived its traditions and its ideals.

The new school can recognize the fact that scholarship implies freedom. The scholar cannot breathe in confined air. It can get rid of the notion that the University is a mechanism, great in proportion to its hugeness, and that any part of its work can be done by machinery. In the true sense a University is not an assemblage of colleges, nor a co-ordination of faculties, nor is its existence or its effectiveness dependent on any details of organization. Its essential quality is individualism. The teacher must be free to make the most of himself and to give to the student the best that is in him. Organization is a limit to freedom, and a hard and fast organization, or any code of regulations beyond those necessary to secure order, is a burden on teacher and student. "In all things," says James Watt, "but proverbially in mechanism, the supreme excellence is simplicity."

A University is an assemblage of teachers and students. Its sole purpose is to bring teachers and students together, to give the power of association and thereby to produce results impossible in isolation. There can be but two units in the ideal school, the teacher and the student, and the value of these may be sometimes interchangeable. All structures and all restrictions which tend to subordinate teacher or student to the needs of the imaginary departments to which he belongs, are useless and may be vicious. Most of the details of organization in American Colleges and Universities are simply survivals of old traditions. They are remains of old barriers erected in undemocratic times for the purpose of creating artificial divisions where real distinctions do not exist.

The essential function of the University, as President Coulter has recently said, is "the emancipation of thought." This was the original impulse which in the dark ages gave rise to the first Universities. To this end the simplest possible organization is the one which serves the purpose best.

The essential of method in the University must be instruction by investigation. It is only by direct contact with the problems of life

and nature that thought can be made free. It is, moreover, true that the best teachers must always be investigators, for no teaching of any subject can be thorough and life-giving which does not incite the student to think for himself.

I am well aware that in these days there is a cant of investigation, as of religion and of all other good things. Germany, for example, is full of young men who set forth to investigate, not because they are "called to explore truth," but because research is the popular fad and inroads into new fields a prerequisite to promotion. So they burrow into every corner in science, in philology, in history, and produce their results in as automatic a fashion as if they were so many excavating machines. Real investigators are born, not made, and this uninspired digging into roots and springs bears the same relation to the work of the real investigators that the Latin verses of Eton and Rugby bear to Virgil and Horace. Nevertheless it is true that investigation is the basis of all good instruction. No second-hand man was ever a great teacher, and I much doubt if any really great investigator was ever a poor teacher. How could he be so? The very presence of Asa Gray was an inspiration to botanists for years after he left the class room. A great man never fails to leave a great mark on every youth who comes within the circle of his influence.

The new University can cut itself loose from the time-worn English College curriculum and its much patched American equivalent, with its system of favored studies and false incentives. It can give to each line of work the time and freedom it needs, thus leaving all questions of the relative value of studies to be settled by each student for himself. It can free itself from traditional methods of teaching, because no teacher of a mechanical sort, left over from former conditions, can have any claim on a new school for pension or support. A College president has recently said that the efficiency of his own school, and of most others known to him, could be increased fifty per cent. if new men could be brought in to fill the places of those teachers who had ceased to grow. A new school need fill its ranks with none but growing men.

The new school can treat its students as men and not as children. In dealing with undergraduates in College work, the methods of the University will always be more effective than the methods of the nursery. The use of marks and prizes as incentives to good scholarship or good behavior, while raising the standard of effort on the part of a certain few, has a potent influence on the many in the direction

of bad scholarship and bad behavior. The nursery should cease where the University begins, and the University student should not do his work in the child's fear of "the rod behind the mirror." The new school can rest its impulse for work on the desire for knowledge, the eternal "hunger and thirst which only the student knows," the only basis on which scholarship can rest. Marks, honors, prizes, degrees even, are incentives which belong to the nursery days. They date from the time when the youth of the aristocracy must be coaxed or driven to a resemblance of culture. As I have elsewhere urged, all these things are forms and forms only, and the substance of our higher education is fast outgrowing them. College marks, College honors, College courses, College degrees, the College itself as distinguished from the University on the one hand, and the public school on the other—all these belong, with the College cap and gown and the wreath of laurel berries, to the babyhood of culture. They are part of our inheritance from the past, from the time when scholarship was not manhood, when the life of the student had no relation to the life of the world.

The new University can in some measure free itself from the shackles of the examination system, which has been so often fatal to true scholarship by the substitution of petty exactness in remembered details for real investigation. This subject has been well treated by Professor Shaler in a late number of "The Atlantic Monthly," and it needs no further word from me.

There is, however, room for reform in the matter of entrance requirements. The work of the secondary schools has long been distracted between the needs of the students preparing for College and those preparing to enter on active life. Neither of these wants is yet fairly met by the most of the secondary schools, and in a normal condition of things the two should be identical. The best preparation for life should certainly be a satisfactory preparation for the advanced studies of the University. The demand of the "practical man" is, however, too often for a surface knowledge of many things, for conceit rather than power, while the College has insisted on certain linguistic requirements, simply because they are traditional, and regardless of the fact that modern scholarship in very many fields rests on a wholly different basis. What the University really wants is to have students trained to see and to think; "practical" life requires the same, and when this demand is really met, the University work and the work of life will each rest on a sound foundation.

The new University can at once recognize itself as a servant of the people, not as an organism existing for its own sake, or for the sake of any class or faction. Its influence and its help should be at the service of the state, not for the satisfaction of any aristocracy of scholars, nor for the maintenance of any organization, social or ecclesiastical. The influence of the coming American University must be felt far beyond its walls. It should be seen in the life of every man throughout the range of its influence. As a servant of the people, the American University has the same claim for popular support which any other public institution could have.

That these relations are fully recognized in the organization and administration of most of our western State Universities is the main element in that rapid development of these schools, the most striking feature of our recent educational history. That such relations have not been recognized in the conventional American College is a leading cause of its present decline and its ultimate change or extinction. In the future of higher education in America, it needs no prophet to foresee that but two elements need to be considered as permanent, the State University and the endowed University, the former an advanced public school supported by taxation, the direct outgrowth of the popular need for higher instruction, the latter supported by the interest of individuals in the same great work. The growth of the latter class of schools in America is conditioned on the obliteration of every hampering restriction. They must, in some degree, assume the public nature of the State University, if they are to take or to maintain any prominent place in the work of higher education.

The conventional College has a steadily weakening hold on the system of education. Of late years it has been freely suggested that it should find its place between the High School on the one hand and the University on the other. There is little tendency, however, on the part of the College toward the assumption of this relation. The ambitions of the Colleges are limited only by their ability to secure funds, and they have a right to these ambitions. They have the same right to undertake University work as academic work, and they must be judged by their results. Their position is in no sense intermediate between the public schools and the University. They are outside of both, for their foundation is not for public purposes, and their ends, as denominational schools, are not public ends. In the work of the churches which maintain them, they find their reason for being. The educational chain, whether strong or weak, cannot count them among

its links. They may help in the work of education, and no one need belittle their immense services, but they are auxiliary to the system, and they can become part of it only by ceasing to be themselves.

In brief, the new University in America can discard the worn-out part of the educational methods and machinery of past ages, and of other lands, and can address itself directly to the life and work of the people of a great republic, and of the coming twentieth century.

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TECHNOLOGICAL EDUCATION IN THE UNITED STATES.

TECHNOLOGICAL education is the product of a century not less notable for its achievements in science than for its enormous progress in productive industry. Science has been characterized by one of its most distinguished representatives as "perfected common sense." On its principles all industry is based to a greater or less extent, but in these days of steam and electricity, of specialized and subdivided occupations, of over-population and international competition, this scientific basis is claiming a larger and larger share of attention. Everywhere industry is becoming more highly organized, more scientifically conducted. Everywhere there is a demand for men trained to be its captains.

Our forefathers brought with them a lively interest in education, but a profound reverence for Oxford and Cambridge as its representatives. It is not surprising, then, that our colleges, while escaping the more flagrant abuses of their prototypes, made haste but slowly in conforming their curricula to Milton's noble definition of "a complete and generous education" as "that which fits a man to perform justly, skilfully, and magnanimously all the offices, both private and public, of peace and war."

Until the early decades of the present century the predominance of classical studies was not, indeed, unnatural. But conditions were changing. James Watt and succeeding inventors had inaugurated a revolution in industry more complete, if less dramatic, than that effected in politics by their contemporaries. Thousands of men were to be replaced by machinery, new industries were to be created, nations to be brought closer together, the conditions of existence to be ameliorated—all by men consciously or unconsciously studying and applying science. Nowhere were these changes to operate more powerfully than in the United States. What would be the effect on our education? Would the colleges realize their opportunity and by co-operating in this great movement emphasize and strengthen their right to the intellectual leadership of the nation? Had they previously occupied themselves more with things and less with forms, they

might conceivably have taken the tide at the flood. Being what they were, they could not.

Marvellous as our national development has been, we cannot doubt that failures would have been fewer, and successes more economical, had higher education from 1800 to 1850, except at a single institution, borne any relation to the needs of industry. During this half century physics was making progress, notably in electricity; and chemistry, at first a chaotic mass of mysterious, unrelated facts, was justifying its claim to the title of science on the one hand, and beginning to revolutionize industry on the other. The forces of vigorously developing science and of successful industry have gradually carried the outworks, at least, of educational prejudice. The conservative colleges have opened a wider and wider door to science; those more venturesome have organized scientific or engineering departments. More significant still, numerous independent colleges of science, pure and applied, have been established, while in the last decade the adaptation of education to life, applied to lower grades of instruction, has led to the development of manual training schools on an extensive scale. Terminology and boundary lines are still more or less confused, but "industrial," "trade," and "manual training" schools are sufficiently distinct from "scientific," "polytechnic" or "technological" schools, to which our attention will be confined. The term "scientific school" though perhaps inapt now that no college of repute ignores science, has acquired a significance nearly identical with the others.

A technological school, then, is an institution of collegiate grade where science is studied with reference to its application to productive and constructive industry. Technological education in the United States may be said to date from the founding of the Rensselaer Polytechnic Institute at Troy, N. Y., in 1824. Stephen Van Rensselaer, its founder, as a member of the State Board of Canal Commissioners, had been actively interested in the construction of the Erie Canal. Engineering as a profession was unknown; men were educated by the work, not for it. The object of the new institution was the general dissemination of that moderate amount of scientific knowledge which its founder recognized as indispensable to the community. Although conducted at one time as a general polytechnic school, the institute has been from its foundation primarily a civil engineering school, interpreting civil engineering, however, in a sense almost as broad as that which once excluded only military engineering.

While the Rensselaer Institute as an independent school of applied

science represents one phase of technological education, its earliest competitors, the Sheffield and the Lawrence Scientific Schools, have grown up as departments of two of our oldest colleges. The progressive spirit of the elder Professor Silliman had gathered about him at Yale an earnest group of students of chemistry, several of whom have since become eminent. The immediate result was the organization in 1847 of a Department of Philosophy and the Arts with a laboratory for analytical chemistry (there were 11 scholars), but with no funds for either salaries or apparatus. Five years later a civil engineering department was established, and in 1855–56 a notable step was taken by the introduction of a course in mining and metallurgy, in charge of a former pupil, Prof. George J. Brush, now director of the school. On these more or less tentative beginnings follows a second stage in the growth of the school, marked by its endowment by Mr. Joseph E. Sheffield, of New Haven, and by its acceptance of the provisions of the national land grant of 1862. The value of the school to Connecticut as an industrial community has been repeatedly recognized by the State Board of Visitors. President Everett's inaugural address at Harvard in 1846 contained these (then) prophetic words:

> "It is a question well worthy to be entertained, whether the time is not arrived when a considerable expansion may be given to our system, of a twofold character. First, by establishing a philosophical faculty, in which the various branches of literature and science should be cultivated beyond the limits of an academical course; and, secondly, by organizing a school of theoretical and practical science, for the purpose especially of teaching its application to the arts of life, and of furnishing a supply of skilful engineers and of persons well qualified to explore and bring to light the inexhaustible natural treasures of the country, and to guide its vast industrial energies in their rapid development."

To the realization of the latter plan Mr. Abbot Lawrence soon contributed $50,000, and the Lawrence Scientific School was organized, with Agassiz, and Peirce, and Asa Gray among its teachers.

A new era in technological education opened with the passage of the Land Grant Act of 1862. The nation could not yet judge of the value of such education, for although graduates of Troy had attained eminence as engineers, their number was not large, and the few other institutions were of too recent origin to depend for adequate appreciation on the reputation of their alumni. Not even the promotors of the bill realized the importance of the possibilities within it. The ordinance of 1787 had contained important provisions for the endowment of educational institutions in the several States and Territories. The recognition of the value to the nation of higher education

reappears in the act of July 2, 1862, entitled "An Act Donating Public Lands to the Several States and Territories which may Provide Colleges for the Benefit of Agriculture and the Mechanic Arts."

The history of the Land Grant Fund in New York, as contained in the valuable published report of the attorneys of Cornell University, presents interesting features, besides much general information. In 1865, the Hon. Ezra Cornell, then State senator, announced that if the State would give the whole income to a single institution to be located at Ithaca, he would supplement its endowment by a half million dollars out of his own private fortune. This generous offer was finally accepted by the State, and thus was founded Cornell University. The conditions for the sale of land and scrip being then very unfavorable, Mr. Cornell purchased a large amount of the land scrip, of which the State's original share was nearly one million acres, at such a rate that the State fund now aggregates about $475,000, undertaking on his part to dispose of the scrip received, and at the end of twenty years to place any profits received in the State treasury as the "Cornell endowment fund" for the benefit of the university. Under the able administration of Mr. Cornell, and later of the Hon. Henry W. Sage, the proceeds of this land have reached nearly $5,000,000, with a probability that the endowment fund may ultimately exceed $6,000,000, rendering the university one of the best endowed in the country. In general it appears that thirty-eight States have received land or scrip aggregating 9,597,840 acres, that the proceeds per acre have varied from 41 cents for Rhode Island to $5.57 for California, and $6.73 for New York, this including, however, the Cornell endowment fund. The average price per acre has been $1.65, the aggregate proceeds nearly $16,000,000.

The latitude allowed under the original act has led to a considerable diversity of results according to the conditions existing in the several States. In some cases the agricultural side has predominated, in others the mechanical. It would appear that education of the latter sort has attained the greater popularity and success.

Although technological schools existed before the passage of the Land Grant Act; although others have been founded and successfully conducted without its aid; although it has been applied to a great extent to the promotion of agricultural education; and although, finally, the income from it is often but a fraction of the total revenue of the institutions receiving it, yet it cannot be doubted that the grant, coming at an opportune time, greatly accelerated the development of

scientific and technological education, and thereby contributed materially to the extraordinary industrial progress of the past twenty years. Its authorship is not the least among the public services of Senator Morrill, of Vermont.

Differences in the organization of technological schools have already been incidentally noted. The number increases rapidly on closer inspection. In the first place, there are all gradations, from the technological school pure and simple, as the Rensselaer Institute, to the university department, as at Cambridge. At the Massachusetts Institute of Technology, for example, there is, besides the engineering and other technical courses, a course of general studies characterized by work in literature, history, and political economy; at Cornell University classical studies occupy a prominent place; at Columbia and Yale the engineering departments are subordinate. In all these classes there is, again, much difference in the variety of training offered, the larger or better-developed institutions offering a wide and gradually increasing range of professional courses, others confining themselves by choice or necessity to a smaller field. Chemistry and civil engineering are perhaps most often presented, but in the East the Worcester Polytechnic Institute and the Stevens Institute devote themselves mainly to mechanical engineering, while in the West—in Michigan and Colorado, for example—there are special schools of mining and metallurgy.

An interesting difference in detail appears in the manual element in the training of mechanical engineers. Generally the time devoted to shop-work is so limited that the latter plays but a subordinate part in the curriculum as a whole. But in some cases, notably at Worcester, this portion of the work is emphasized and elaborated to such an extent that one-fourth the assigned time is devoted to it, and the preference usually given to instruction over construction tends to be reversed. In spite of these and other points of dissimilarity, all the institutions have enough in common to differentiate them from other colleges. The central and essential element of the technological school is the laboratory. Including under this designation the various forms of training where the hand and the senses play a part, we have, in the first place, scientific laboratories of physics, of chemistry, and so on, as well as field-work in the various natural sciences; in the second place, the general drawing room, free-hand and mechanical; in the third place, the distinctively technical laboratories of engineering, of applied mechanics, analytical and industrial chemistry, archi-

tectural and machine design, and the like, where principles find their application and practice finds its foundation. The first class of laboratories should exist in the college, the second may appear, the third are characteristic of the technological school, and on these depends its usefulness. Laboratory instruction, particularly that of the third class, is, in comparison with other means of education, enormously expensive. Proper equipment and maintenance of a laboratory for steam or electrical engineering is hopelessly beyond the resources of the small colleges, while the expense tends to increase, in consequence of specialization, faster than the number of students.

A second characteristic distinction between the college and the technological school appears in the methods of instruction. The average student whose college education is not professional, that is, the student who expects to follow neither law, theology, medicine, nor teaching, and, indeed, this exception is far too sweeping, studies what he will seldom if ever use. The aim of the instructor may well be to impart by lectures or text-books a comprehensive view of principles, even to the neglect of details. In the polytechnic school, on the other hand, the knowledge acquired is put to immediate use. In the college the student learns, for example, what a mathematical subject is; in the technological school he learns how to use it.

Although colleges and technological schools are distinguished most often and obviously by the subject-matter of their curricula, the difference is sometimes overestimated. It is recognized that an education without literary studies is as incomplete as one without scientific studies; and it is probable that the former principle is as seldom violated by the one class of schools, as the latter is by the other. A well-balanced technological curriculum will contain a considerable proportion of modern languages, history, literature, and economics. These and other more or less general characteristics I may be permitted to illustrate, for convenience, by reference to the Massachusetts Institute of Technology.

The institute was opened in 1865, owing its foundation largely to the genius and foresight of Prof. William Barton Rogers. It receives one-third of the income of the land-grant fund in Massachusetts, but depends mainly on tuition fees for its maintenance. Students of good high-school training are admitted on examination, the average age at entrance being about eighteen and a half years. Of the twelve courses leading to the degree of Bachelor of Science, those in civil, mechanical, electrical, chemical, and sanitary engineering, in mining engi-

neering, metallurgy, and in architecture are distinctly technical; the courses in chemistry, in biology, in physics, and in geology are technical, with a tendency toward pure science; the course in general studies is a combination of literary studies with those in natural science. Further variety is attained in the higher years by specializing the professional work, leading at present to thirty-four more or less distinct options. In the first year all these courses are identical, the chief features of that year being general chemistry, mathematics, and drawing. The mathematical studies are a direct and necessary preparation, in most courses, for later technical work. While this is true to some extent of chemistry, the great importance attached to that subject is due to the fact that it usually forms the first thorough training, not only of the student's senses but of the power of inductive reasoning, so fundamental in the study of natural science, and so often ignored in primary and secondary schools, if not in the colleges.

At the end of the first year the student must decide which one of the diverging courses to follow, the results of the previous work guiding or restricting this choice. A student cannot, for instance, pursue an engineering course without having shown some aptitude for mathematics. At present the drift is toward the mechanical, electrical, and civil engineering courses in the order named, these comprising nearly 70 per cent. of students pursuing full courses. In the second and succeeding years, the more important features are: first, the progressive substitution of technical for general subjects, second, a corresponding increase in the amount of laboratory work, and finally, the gradual introduction of more or less independent original work, scientific research, technical investigation, or constructive design. Thus in the fourth year of the course in mechanical engineering the student devotes himself almost entirely to more advanced technical work, either in mill or marine engineering or in locomotive construction. Laboratory work takes the form of tests of boilers, pumps, and so on, followed by an investigation to be embodied in the graduating thesis. It may be added that the engineering laboratories are in no sense "toy workshops." Among the apparatus for experiment are, for example, a one-hundred-and-fifty horse-power engine, and a testing machine capable of breaking full-sized beams up to twenty-five feet in length. Shop work occupies a strictly subordinate position. Its object is to impart some familiarity with tools and with materials, not to produce skilled mechanics. Regular instruction is supplemented but not superseded by excursions to manufactories. A noteworthy characteristic

of the curricula of the engineering courses is the unity secured by basing all upon a nearly uniform foundation, not merely of mathematics and physics, but of an extended course in mechanics and the strength of materials, with laboratory work. All "regular" students receive systematic instruction in literature, history, and political economy, as well as in modern languages. It is not strange that some students, even with fair preparation, prove incapable of the mental development which such a curriculum requires. On the other hand, it may fairly be claimed that those who complete it have been truly educated.

The time has not yet come to pronounce final judgment upon technological education as now organized. But facts are not lacking on which to base replies to some of the most persistent criticisms. The necessity of science to modern industry is, however, no longer a matter of argument. To quote an authority* eminent in both directions: "The advancement of the last fifty years has, I venture to submit, rendered theory and practice so interdependent that an intimate union between them is a matter of absolute necessity for our future progress." "It is to the man of science who also gives attention to practical questions, and to the practitioner who devotes part of his time to the prosecution of strictly scientific investigations, that we owe the rapid progress of the present day, both merging more and more into one class, that of pioneers in the domain of nature."

Differences of opinion exist, not as to the need of education for industry, but as to the proportion which the school can safely undertake, and that which it must leave to be acquired in professional practice. Often too much has been expected. The graduate has believed himself already an engineer. The manufacturer has made insufficient allowance for shortcomings which no school could prevent. But as the school and the shop are coming to appreciate each other, the problem of bridging the chasm which has separated them, to the immense detriment of both, is approaching its solution. Individual cases of marked success of technological graduates might be multiplied, from the engineer of the Brooklyn Bridge to the architect of the Women's Building for the Columbian exposition. More significant is the fact that the larger railroads, iron works, and electrical companies are employing graduates by the score, often in responsible positions, and that the demand for well-trained engineers, architects, and chemists far exceeds the supply. We have, moreover, data of a different

*C. W. Siemens.

sort for estimating the value of technical education. At the beginning of the present century Germany was disorganized, Prussia slowly recovering from the exhaustion of the Napoleonic wars. England, on the other hand, with its immense natural resources in coal and iron, with abundant capital, marvellous inventions, and practical control of the world's commerce, had no industrial rival. It came to regard this supremacy as part of the order of nature. Then came the international expositions, beginning at London in 1851. Prussia, conscious of inferiority, determined to overcome its natural disadvantages by education, and proceeded to build up the most highly organized system of technical schools of all grades. At the next international exposition progress was clearly shown. England did not heed it. In 1862 England was "beaten, and that not in some points only, but, by some nation or other, in nearly all those points on which we had previously prided ourselves." Since that time, Sir Lyon Playfair and his associates have fought against heavy odds the battle of technical education for England. A recent British royal commission, after making an international study of the subject, have been able to report that while the training of managers of industrial works was "provided for on the continent in a way beyond all comparison more complete and effective than in this country," England had not yet been surpassed by any of its industrial rivals. And yet: "When, less than half a century ago, continental countries began to construct railways and to erect modern mills and mechanical work-shops, they found themselves face to face with a full-grown industrial organization in this country, which was almost a sealed book to those who could not obtain access to our factories." Painfully, but surely, England is making progress. Owens and Mason and Yorkshire Colleges represent the nation as Oxford and Cambridge do not.

The smoke of the battle against educational conversatism is everywhere lifting. The theory that the subject-matter of education need bear little or no relation to the business of life, has had, indeed, but brief sway. Education had long been for the clergy and the lawyers, who monopolized it to a great extent, until, in the stress of the modern conflict, the notion was developed that classical study trains the mind in some superlative and mysterious manner. Interesting for comparison is the protest of a mediæval conservative: "There is a new language, my children, called Greek, which some pestilent fellows are recommending to us. I bid you beware of it. It is the language of the devil, and whoever meddles with it is likely to go straight to

hell." It is coming more and more to be recognized that the faculties which scientific study educates, and literary study does not, are not the lowest nor the least important; that trained powers of observation, habits of accurate thinking, and a knowledge of inanimate things are no inadequate equivalents for cultivated literary taste, facility in expression, and acquaintance with dead languages. In the words of Mr. John Stuart Mill: "If there were no more to be said than that scientific education teaches us to think, and literary education to express our thoughts, do we not require both?"

Science being recognized, can she be better studied in the college or in the technological school? Something may be said on both sides. If the college realizes that the true teaching of science is impossible without laboratories, if the technological school does not sacrifice theory to practice, they will be at least worthy competitors. The comparatively late age at which the college-bred lawyer, physician, or clergyman enters professional life is admitted to be a great evil, and has contributed in a large degree to current movements toward abridging the college course, or toward a partial coalescence of the collegiate and the professional courses. This difficulty the technological student avoids, and even if he precedes his professional training by a college course he may bring both within six years, and enter his profession more evenly educated and with the prospect of earlier remuneration than his more "learned" competitor. Technological education is still in its immature youth. Even now, hampered by ignorance on the one hand, and conservatism on the other, by untrained students and untried difficulties, it need fear no criticism. What development may it not attain when our educational machinery has been adapted to its needs, when states or individuals have placed larger means at its disposal, when the United States has achieved that industrial supremacy which is predicted for it?

H. W. Tyler.

A REVIEW OF THE HIGHER EDUCATION OF WOMEN.

AMERICAN College education in the quarter century since the Civil War has undergone more numerous and more fundamental changes than befell it in a hundred years before. These changes have not occurred unnoticed. A multitude of journals and associations are busy every year discussing the results of the experiments in teaching which go on with increasing daring and fruitfulness in nearly all our colleges and schools. There still exists a wide divergence of opinion among the directors of men's colleges in regard to a variety of important questions; the conditions and proper age for entrance, the length of the course of study, the elective system, both of government and instruction, the requirements for the bachelor's and master's degrees, the stress to be laid on graduate work—these, and many sequents of these, touching the physical, social, and religious life of the young men of the land, are undergoing sharp discussion.

The advanced education of young women is exposed to all the uncertainties which beset the education of men, but it has perplexities of its own in addition. After fifty years of argument and twenty-five of varied and costly experiment, it might be easy to suppose that we were still in chaos, almost as far from knowing the best way to train a woman as we were at the beginning. No educational convention meets without a session devoted to the difficulties in "the higher education of women"; so important has the subject become, and so hard is it to satisfy in any one system the variety of its needs. Yet chaos may be thought more chaotic than it really is. In the din of discussion it would not be strange if the fair degree of concord already reached should sometimes be missed. We are certainly still far from having found the one best method of college training for girls. Some of us hope we may never find it, believing that in diversity, no less than in unity, there is strength. But already three tolerably clear, consistent, and accredited types of education appear which it will be the purpose of this paper to explain. The nature of each with its special strengths and weaknesses will be set forth in no spirit of partisanship, but in the belief that a cool understanding of what is doing

at present among fifty thousand college girls may make us wiser and more patient in our future growth. What, then, are the three types, and how have they arisen?

When to a few daring minds the conviction came that education was a right of personality rather than of sex, and when there was added to this growing sentiment the pressing demand for educated women as teachers and as leaders in philanthropy, the simplest means of equipping women with the needful preparation was found in the existing schools and colleges. Scattered all over the country were colleges for men, young for the most part and small, and greatly lacking anything like a proper endowment. In nearly every State west of the Alleghanies, "Universities" had been founded by the voluntary tax of the whole population. Connected with all the more powerful religious denominations were schools and colleges which called upon their adherents for gifts and students. These democratic institutions had the vigor of youth, and were ambitious and struggling. "Why," asked the practical men of affairs who controlled them, "should not our daughters go on with our sons from the public schools to the university which we are sacrificing to equip and maintain? Why should we duplicate the enormously expensive appliances of education when our existing colleges would be bettered by more students? By far the large majority of our boys and girls study together as children; they work together as men and women in all the important concerns of life; why should they be separated in the lecture room for only the four years between eighteen and twenty-two, when that separation means the doubling of an equipment already too poor by half?"

It is not strange that with this and much more practical reasoning of a similar kind, co-education was established in some colleges at their beginning, in others after debate, and by a radical change in policy. When once the chivalrous desire was aroused to give girls as good an education as their brothers, western men carried out the principle unflinchingly. From the kindergarten to the preparation for the doctorate of philosophy, educational opportunities are now practically alike for men and women. The total number of colleges of arts and sciences empowered by law to give degrees, reporting to Washington in 1888, was 389. Of these, 237, or nearly two-thirds, were co-educational. Among them are all the State universities, and nearly all the colleges under the patronage of the Protestant sects.*

* Report of the Commissioner of Education, 1887-88, Chapter xi.

Hitherto I have spoken as if co-education were a western movement; and in the West it certainly has had greater currency than elsewhere. But it originated, at least so far as concerns superior secondary training, in Massachusetts. Bradford Academy, chartered in 1804, is the oldest incorporated institution in the country to which boys and girls were from the first admitted; but it closed its department for boys in 1836, three years after the foundation of co-educational Oberlin and in the very year when Mount Holyoke was opened by Mary Lyon in the large hope of doing for young women what Harvard had been founded to do for young men just two hundred years before. Ipswich and Abbot Academies in Massachusetts had already been chartered to educate girls alone. It has been the dominant sentiment in the East that boys and girls should be educated separately. The older, more generously endowed, more conservative seats of learning, inheriting the complications of the dormitory system, have remained closed to women. The requirements for the two sexes are thought to be different. Girls are to be trained for private, boys for public life. Let every opportunity be given, it is said, for developing accomplished, yes, even learned women; but let the process of acquiring knowledge take place under careful guardianship, among the refinements of home life, with graceful women, their instructors, as companions, and with suitable opportunities for social life. Much stress is laid upon assisting girl students to attain balanced characters, charming manners, and ambitions that are not unwomanly. A powerful moral, often a deeply religious earnestness, shaped the discussion, and finally laid the foundations of woman's education in the East.

In the short period of the twenty years after the war, the four women's colleges which are the richest in endowments and students of any in the world, were founded and set in motion. These colleges —Vassar, opened in 1865, Wellesley and Smith in 1875, and Bryn Mawr in 1885—have received in gifts of every kind about $6,000,000 and are educating nearly 2,000 students. For the whole country the Commissioner of Education reports 207 institutions for the superior instruction of women, with more than 25,000 students. But these resources proved inadequate. There came an increasing demand, especially from teachers, for education of all sorts; more and more, too, for training in subjects of advanced research. For this, only the best equipped men's universities were thought sufficient, and women began to resort to the great university centres of England and Germany. In an attempt to meet a demand of this sort the Harvard

Annex began, twelve years ago, to provide a few women with instruction from members of the Harvard Faculty.

Where, in a great centre of education, for many years books have accumulated, and museums and laboratories have multiplied, where the prestige and associations of a venerable past have grown up, and cultivated surroundings assure a scholarly atmosphere; in short, in the shadow of all that goes to make up the gracious influences of an old and honorable university, it was to be expected that earnest women would gather to seek a share in the enthusiasm for scholarship, and the opportunities for acquiring it, which their brothers had enjoyed for 250 years.

These, then—co-education, the woman's college, and the annex—are the three great types of college in which the long agitation in behalf of women's education has thus far issued. Of course they are but types, that is, they do not always exist distinct and entire, but they are rather the central forms to which many varieties approximate. The characteristic features of each I must now describe, and, as I promised at the beginning, point out their inherent strengths and weaknesses; for each, while having much to recommend it, still bears in itself the defects of its qualities. To explain dangers as well as promises is the business of the critic, as contrasted with that of the advocate. To this business I now turn, and I may naturally have most in mind the University of Michigan, my own *Alma Mater*, Wellesley College, with whose government I have been connected for a dozen years, and the Harvard Annex, whose neighbor I now am.

Co-education involves, as its name implies, the education of a company of young men and women as a single body. To the two sexes alike are presented the same conditions of admission, of opportunities during the course, of requirements for the degrees, of guardianship, of discipline, of organization. The typical features are identical classrooms, libraries, and laboratories, occupied at the same time, under the same instructors; and the same honors for like work. Ordinarily all the instructors are men, although in a few universities professorships are held by women. Usually no dormitories or boarding-houses are provided for either the young men or women, and no more surveillance is kept over the one than over the other. This feature, however, is not essential. At Cornell, Oberlin, and elsewhere, often out of local necessity, buildings have been provided where the young women may—in some instances, must—live together under the ordinary regulations of home life, with a lady in charge. But in most of

the higher co-educational institutions the principle has from the first been assumed that students of both sexes become sufficiently matured by eighteen years of home, school, and social life—especially under the ample opportunities for learning the uses of freedom which our social habits afford—safely to undertake a college course, and advantageously to order their daily lives. Of course all have a moral support in the advice and example of their teachers, and they are held to good intellectual work by the perpetual demand of the class-room, the laboratory, and the thesis.

The girl who goes to the University of Michigan to-day, just as when I entered there in 1872, finds her own boarding-place in one of the quiet homes of the pleasant little city whose interest centres in the 2,500 students scattered within its borders. She makes the business arrangements for her winter's fuel and its storage; she finds her washerwoman, or her laundry; she arranges her own hours of exercise, of study, and of sleep; she chooses her own society, clubs, and church. The advice she gets comes from another girl student of sophomoric dignity who chances to be in the same house, or possibly from a still more advanced young woman whom she met on the journey, or sat near in church on her first Sunday. Strong is the comradeship among these ambitious girls, who nurse one another in illness, admonish one another in health, and rival one another in study only less eagerly than they all rival the boys. In my time in college the little group of girls, suddenly introduced into the army of young men, felt that the fate of our sex hung upon proving that "lady Greek" involved the accents, and that women's minds were particularly absorptive of the calculus and metaphysics. And still in those sections, where, with growing experience, the anxieties about co-eduation have been allayed, a healthy and hearty relationship and honest rivalry between young men and women exists. It is a stimulating atmosphere, and develops in good stock a strength and independent balance which tell in after life.

In estimating the worth of such a system as this, we may say at once that it does not meet every need of a woman's nature. No system can, no system that has yet been derived. A woman is an object of attraction to men, and also in herself so delicately organized as to be fitted peculiarly for the graces and domesticities of life. The exercise of her special function of motherhood demands sheltered circumstances and refined moral perceptions. But then, over and above all this, she is a human being—a person, that is, who has her own

way in the world to make, and who will come to success or failure, in her home or outside it, according as her judgment is fortified, her observations and experiences are enlarged, her courage is rendered strong and calm, her moral estimates are trained to be accurate, broad and swift. In a large tract of her character—is it the largest tract?—her own needs and those of the young man are identical. Both are rational persons, and the greater part of the young man's education is addressed to his rational personality, rather than to the peculiarities of his sex. Why, the defenders of co-education ask, may not the same principles apply to women? Why train a girl specifically to be a wife and mother when no great need is felt for training a boy to be a husband and father? In education, as a public matter, the two sexes meet on common ground. The differences must be attended to privately.

At any rate, whatever may be thought of the relative importance of the two sides—the woman side, and the human side—it will be generally agreed that the training of a young woman is apt to be peculiarly weak in agencies for bringing home to her the importance of direct and rational action. The artificialities of society, the enfeebling indulgence extended to pretty silliness, the gallantry of men glad ever to accept the hard things and leave to her the easy—by these influences any comfortably placed and pleasing girl is pretty sure to be surrounded in her early teens. The co-educationalists think it wholesome that in her later teens and early twenties she should be subjected to an impartial judgment ready to estimate her without swerving and tell her as freely when she is silly, ignorant, fussy, or indolent as her brother himself is told. Co-education, as a system, must minimize the different needs of men and women; it appeals to them and provides for them alike, and then allows the natural tastes and instincts of each scope for individuality. The strengths of this system, accordingly, are to be found in its tendency to promote independence of judgment, individuality of tastes, common sense and foresight in self-guidance, disinclination to claim favor, interest in learning for its own sake; friendly, natural, unromantic, non-sentimental relations with men. The early fear that co-education would result in class-room romances has proved exaggerated. These young women do marry; so do others; so do young men. Marriage is not in itself an evil, and many happy homes have been founded in the belief that long and quiet acquaintance in intellectual work, and intimate interests of the same deeper sort, form as solid a basis for a successful marriage as ball-room intercourse or a summer at Bar Harbor.

The weaknesses of this system are merely the converse of its strengths. It does not usually provide for what is distinctively feminine. Refining home influences and social oversight are largely lacking; and if they are wanting in the home from which the student comes, it must not be expected that she will show, on graduation, the graces of manner, the niceties of speech and dress, and the shy delicacy, which has been encouraged in her more tenderly nurtured sister.

The woman's college is organized under a different and far more complex conception. The chief business of the man's college, whether girls are admitted to it or not, is to give instruction of the best available quality in as many subjects as possible; to furnish every needed appliance for the acquirement of knowledge and the encouragement of special investigation. The woman's college aims to do all this, but it aims, also, to make for its students a home within its own walls, and to develop other powers in them than the merely intellectual. At the outset this may seem a simple matter, but it quickly proves as complicated as life itself. When girls are gathered together by hundreds, isolated from the ordinary conditions of established communities, the college stands to them pre-eminently *in loco parentis*. It must provide resident physicians and trained nurses to be ready in case of illness, and, to prevent illness, must direct exercise, sleep, hygiene, and sanitation, accepting the responsibility not only of the present health of its students, but also, in large degree, of their physical power in the future. It generally furnishes them means of social access to the best men and women of their neighborhood; it draws to them leaders in moral and social reforms to give inspiration in high ideals and generous self-sacrifice, and it undertakes religious instruction while seeking still to respect the varied faiths of its students. In short, the arrangements of the woman's college, as conceived by founders, trustees, and faculty, have usually aimed with conscious directness at building up character, inspiring to the service of others, cultivating manners, developing taste, and strengthening health, as well as providing the means of sound learning.

It may be said that a similar up-building of the personal life results from the training of every college that is worthy of the name; and fortunately it is impossible to enlarge knowledge without, to some extent, enlarging life. But the question is one of directness or indirectness of aim. The woman's college puts this aim in the foreground side by side with the acquisition of knowledge. By setting its students apart in homogeneous companies, it seeks to cultivate com-

mon ideals. Of its teaching force, a large number are women who live with the students in the college buildings, sit with them at table, join in their festivities, and in numberless intimate ways share and guide the common life. Every student, no matter how large the college, has friendly access at any time to several members of the faculty, quite apart from her relations with them in the class-room. In appointing these women to the faculty no board of trustees would consider it sufficient that a candidate was an accomplished specialist. She must be this, but she should be also a lady of unobjectionable manners and influential character; she should have amiability and a discreet temper, for she is to be a guiding force in a complex community, continually in the presence of her students, an officer of administration and government no less than of instruction. Harvard and Johns Hopkins can ask their pupils to attend the lectures of a great scholar, however brusque his bearing or unbrushed his hair. They will not question their geniuses too sharply, and will trust their students to look out for their own proprieties of dress, manners, and speech. But neither Wellesley nor any other woman's college could find a place in its faculty for a woman Sophocles or Sylvester. Learning alone is not enough for women.

Not only in the appointment of its teaching body, but in all its appliances the separate college aims at a rounded refinement, at cultivating a sense of beauty, at imparting simple tastes and generous sympathies. To effect this, pictures are hung on the walls, statues and flowers decorate the rooms, concerts bring music to the magnified home, and parties and receptions are paid for out of the college purse. The influence of hundreds of mentally eager girls upon the characters of one another when they live for four years in the closest daily companionship is most interesting to see. I have watched the ennobling process go on for many years among Wellesley students, and I am confident that no more healthy, generous, democratic, beauty-loving, serviceable society of people exists than the girls' college community affords. That choicest product of modern civilization, the American girl, is here in all her diverse colors. She comes from more than a dozen religious denominations and from every political party; from nearly every State and Territory in the Union, and from the foreign lands into which English and American missionaries, merchants, or soldiers have penetrated.* The farmer's daughter from the western prairies is beside the child whose father owns half a dozen mill towns

* See the President's Report of Wellesley College for 1889–90.

of New England. The pride of a southern senator's home rooms with an anxious girl who must borrow all the money for her college course because her father's life was given for the Union. Side by side in the boats, on the tennis grounds, at the table, arm in arm on the long walks, debating in the societies, vigorous together in the gymnasium and the library, girls of every grade gather the rich experiences which will tincture their future toil, and make the world perpetually seem an interesting and friendly place. They here learn to "see great things large, and little things small."

This detailed explanation of the peculiarities of the girls' college renders unnecessary any long discussion of its strengths and weaknesses. According to the point of view of the critic these peculiarities themselves will be counted means of invigoration or of enfeeblement. Living so close to one another as girls here do, the sympathetic and altruistic virtues acquire great prominence. Petty selfishness retreats or becomes extinct. An earnest, high-minded spirit is easily cultivated, and the break between college life and the life from which the student comes is reduced to a minimum.

It is this very fact which is often alleged as the chief objection to the girls' college. It is said that its students never escape from themselves and their domestic standard, that they do not readily acquire a scientific spirit, and become individual in taste and conduct. Is it desirable that they should? That I shall not undertake to decide. I have merely tried to explain the kinds of human work which the different types of higher training schools are best fitted to effect for women. Whether the one or the other kind of work needs most to be done is a question of social ethics which the future must answer. I have set forth a type, perhaps, in the endeavor after clearness, exaggerating a little its outlines, and contrasting it more sharply with its two neighbor types than individual cases would justify. There are colleges for women which closely approximate in aim and method the colleges for men. No doubt those which move farthest in the directions I have indicated are capable of modification. But I believe what I have said gives a substantially true account of an actually existing type—a type powerful in stirring the enthusiasm of those who are submitted to it, subtle in its penetrating influences over them, and effective in winning the confidence of a multitude of parents who would never send their daughters to colleges of a different type.

The third type is the "annex," a recent and interesting experiment in the education of girls, whose future it is yet difficult to predict.

Only a few cases exist, and as the Harvard Annex is the most conspicuous, by reason of its dozen years of age and nearly 200 students, I shall describe it as the typical example. In the Harvard Annex, groups of young women undertake courses of study in classes whose instruction is furnished entirely by members of the Harvard faculty. No college officer is obliged to give this instruction, and the Annex staff of teachers is, therefore, liable to considerable variation from year to year. Though the usual four classes appear in its curriculum, the large majority of its students devote themselves to special subjects. A wealthy girl turns from fashionable society to pursue a single course in history or economics; a hard-worked teacher draws inspiration during a few afternoons each week from a famous Greek or Latin professor; a woman who has been long familiar with French literature explores with a learned specialist some single period in the history of the language. Because the opportunities for advanced and detached study are so tempting, many ladies living in the neighborhood of the Annex enter one or more of its courses. There are consequently among its students women much older than the average of those who attend the colleges.

The business arrangements are taken charge of by a committee of ladies and gentlemen, who provide class-rooms, suggest boarding-places, secure the instructors, solicit the interest of the public—in short, manage all the details of an independent institution; for the noteworthy feature of its relation to its powerful neighbor is this, that the two, while actively friendly, have no official or organic tie whatever. In the same city, young men and young women of collegiate rank are studying the same subjects under the same instructors; but there are two colleges, not one. No detail in the management of Harvard College is changed by the presence in Cambridge of the Harvard Annex. If the corporation of Harvard should assume the financial responsibility, supervise the government, and give the girl-graduates degrees, making no other changes whatever, the Annex would then become a school of the university, about as distinct from Harvard College as the medical, law, or divinity schools. The students of the medical school do not attend the same lectures or frequent the same buildings as the college undergraduates. The immediate governing boards of college and medical school are separate. But here comparison fails, for the students of the professional schools may elect courses in the college and make use of all its resources. This the young women cannot do. They have only the rights of all Cam-

bridge ladies to attend the many public lectures and readings of the university.

The Harvard Annex is, then, to-day a woman's college, with no degrees, no dormitories, no women instructors, and with a staff of teachers made up from volunteers of another college. The Fay House, where offices, lecture and waiting rooms, library and laboratories are gathered, is in the heart of old Cambridge, but at a little distance from the college buildings. This is the centre of the social and literary life of the students. Here they gather their friends at afternoon teas; here the various clubs which have sprung up, as numbers have increased, hold their meetings and give their entertainments. The students lodge in all parts of Cambridge and the neighboring towns, and are directly responsible for their conduct only to themselves. The ladies of the management are lavish in time and care to make the girls' lives happy and wholesome; the secretary is always at hand to give advice; but the personal life of the students is as separate and independent as in the typical co-educational college.

It is impossible to estimate either favorably or adversely the permanent worth of an undertaking still in its infancy. Manifestly, the opportunities for the very highest training are here superb if they happen to exist at all. In this, however, is the incalculable feature of the system. The Annex lives by favor, not by right, and it is impossible to predict what the extent of favor may at any time be. A girl hears that an admirable course of lectures has been given on a topic in which she is greatly interested. She arranges to join the Annex and enter the course, but learns in the summer vacation that through pressure of other work, the professor will be unable to teach in the Annex the following year. The fact that favor rules, and not rights, peculiarly hampers scientific and laboratory courses, and for its literary work obliges the Annex largely to depend on its own library. Yet when all these weaknesses are confessed—and by none are they confessed more frankly than by the wise and devoted managers of the Annex themselves—it should be said that hitherto they have not practically hindered the formation of a spirit of scholarship, eager, free and sane to an extraordinary degree. The Annex girl succeeds in remaining a private and unobserved gentlewoman, while still, in certain directions, pushing her studies to an advanced point seldom reached elsewhere.

A plan in some respects superficially analogous to the American annex has been in operation for many years at the English, and more

recently at some of the Scotch universities, where a hall or college for women uses many of the resources of the university. But this plan is so complicated with the peculiar organization of English university life that it cannot usefully be discussed here. In the few colleges in this country where, very recently, the annex experiment is being tried, its methods vary markedly.

Barnard College in New York is an annex of Columbia only in a sense, for not all her instruction is given by Columbia's teaching force, though Columbia will confer degrees upon her graduates. The new woman's college at Cleveland sustains temporarily the same relations to Adelbert College, though to a still greater extent she provides independent instruction.

In both Barnard and Cleveland women are engaged in instruction and in government. Indeed the new annexes which have arisen in the last three years seem to promise independent colleges for women in the immediate neighborhood of, and in close relationship with, older and better equipped universities for men, whose resources they can, to some extent, use, whose standards they can apply, whose tests they can meet. When they possess a fixed staff of teachers they are not, of course, liable to the instabilities which, at present, beset the Harvard Annex. So far, however, as these teachers belong to the annex, and are not drawn from the neighboring university, the annex is assimilated to the type of the ordinary woman's college, and loses its distinctive merits. If the connection between it and the university should ever become so close that it had the same right to the professors as the university itself, it would become a question whether the barriers between the men's and the women's lecture rooms could be economically maintained.

The preceding survey has shown how in co-education a woman's study is carried on inside a man's college, in the woman's college outside it, in the annex beside it. Each of these situations has its advantage. But will the community be content to accept this; permanently to forego the counter advantages, and even after it fully realizes the powers and limitations of the different types, firmly to maintain them in their distinctive vigor? Present indications render this improbable. Already co-educational colleges incline to more careful leadership for their girls. The separate colleges, with growing wealth, are learning to value intrepidity, and are carrying their operations close up to the lands of the Ph.D. The annex swings in its middle air, sometimes inclining to the one side, sometimes to the other. And

outside them all, the great body of men's colleges continually find it harder to maintain their isolation, and extend one privilege after another to the seeking sex.

The result of all these diversities is the most instructive body of experiment that the world has seen for determining the best ways of bringing woman to her powers. While the public mind is so uncertain, so liable to panic, and so doubtful, whether, after all, it is not better for a girl to be a goose, the many methods of education assist one another mightily in their united warfare against ignorance, selfish privileges, and antiquated ideals. It is well that for a good while to come woman's higher education should be all things to all mothers if by any means it may save girls. Those who are hardy enough may continue to mingle their girls with men; while a parent who would be shocked that her daughter should do anything so ambiguous as to enter a man's college may be persuaded to send her to a girl's. Those who find it easier to honor an old university than the eager life of a young college, may be tempted into an annex. The important thing is that the adherents of these differing types should not fall into jealousy, and belittle the value of those who are performing a work which they themselves cannot do so well. To understand one another kindly is the business of the hour—to understand and to wait.

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PHYSICAL HINDRANCES TO TEACHING GIRLS.

EIGHTEEN years ago, when Dr. Clarke's "Sex in Education" * was published, it aroused anxious questionings and indignant protests. Vassar College was then only eight years old. Many felt that possibly Dr. Clarke might be right in his conclusions regarding women; at any rate, they could not prove that he was wrong. On the other hand, those that protested had only general principles and few and possibly inconclusive experiments upon which to base their dissent. If the little book had appeared in 1891 instead of in 1873, a host of vigorous college *alumnæ* from Vassar, Wellesley, Smith, Cornell, Girton, and Newnham, might have revived the memory of their Harkness to answer: "*Usus magister optimus est.*" Good doctor, look at us! Look at the statistics published in a recent number of the "Century" magazine for information concerning our health as compared with the health of our sisters who are not college-bred!

But however the case may stand with college women, were Dr. Clarke alive, and were he the attending physician at most private schools for girls, where he could see with what wear and tear of the flesh, in many cases, any attempt at thorough work is attended, he would be confirmed in his conclusions. And if the teachers in private schools did not have before them the experience of the colleges for women, they might be tempted to answer, Yes, you are right. One must choose between a healthy animal and an educated invalid. What may be the experience of public schools, it is not the purpose of this article to consider. It will confine itself to private schools—to thorough private schools, because only in them comes any demand upon brain and soul—and to the more expensive private schools, because there we find girls of our wealthy leisure class, girls whose intellectual training has received a very small share of public attention. It is not strange, indeed, that during these twenty-six revolutionary years of education for women, the college girl should have monopolized public attention; but now that women's colleges are no longer an experiment, it is time that some thought be given to the girls for

* "Sex in Education," by Edward H. Clarke (Boston, 1873).

whose mental equipment the private school is responsible. That these girls form a large and important class no one can deny; a class much larger—more the pity—than the class that goes forth from our colleges. They go early into "society," and most of them have no other aim than to secure a husband and an establishment. In this ambition they are usually, sooner or later, successful. Now, at this stage of the world's progress, every such girl, whether she will or not, has in her keeping a great responsibility. Around her are the discontented masses, watching to see what the rich ladies and gentlemen will do next. What will the rich lady do? By her sumptuous living, and her pleasure-seeking, and her extravagance, by her conscious or unconscious lowering of her husband's standards of right and duty, will she throw her influence in the wrong way? Or will she bring a trained intelligence, a wise self-sacrifice, and a consecrated womanly tact, to aid in the social task of the time? One or the other, of course, she must do. The veriest nonentity that ever bore the name of woman, if she did nothing worse, blunted the keenness of some man's spiritual sense, made it harder for him, with her before his eyes, to believe the best of himself and his kind, and to hold himself to his faith.

It is not an unheard of thing for these girls to leave school with no more mental development than a child of twelve. Why? Often because they are not considered well enough to endure school work. This is, of course, by no means always even the ostensible reason. But the plea of ill-health is urged with sufficient frequency and reason to demand serious consideration. It has seemed impossible to gather statistics in regard to the health of girls in private schools; indeed, such statistics might be of little value, but the testimony of the few teachers that have responded to requests for information—and their schools probably have no monopoly of the invalids—bears sad witness to the weak physical condition of the girls of our leisure class. Leaving out of the account the day pupils, whose dressmakers, dancing-schools, church-fairs, and social engagements add unfavorable complications, one finds that the health of the family students in girls' private schools is such as to make thorough intellectual work extremely difficult. Yet the conditions of a well-ordered home-school are not of a nature to wear upon a girl of moderate physical and mental endurance. Breakfast at half-past seven; a short walk before school at a quarter of nine; recitations, music, and study, interrupted by recess and light gymnastics, until half-past one; then luncheon, a little rest, a brisk walk or tennis; two and a half hours more of vigorous

study and music, followed by half an hour's gymnastics; dinner, an evening when no studying but only good reading or play is permitted; bed at half-past nine for nine hours—surely, there is nothing in this routine to induce nervous prostration. Yet it is the exception rather than the rule that half the pupils, though they may not call themselves invalids, are in a physical condition to endure it. Even in schools that refuse to accept girls unless there is a reasonable chance of their getting through the year, it is not unusual for one-third to be entered by their parents with the warning that their daughters are delicate and will need special consideration and watching—a warning in all probability followed by the request that they shall not be "bothered with mathematics." These weakly ones, if their mothers leave them alone, and if they themselves become interested in their work, by dint of three or four extra hours for rest and exercise, manage to hold out through the year, and frequently end it in improved health. But unless these two conditions are fulfilled they often fall by the way. Nervousness, backache, weakness, loss of appetite, generally follow soon upon the realization that school means work. A hard lesson to be mastered lays a girl low with a headache or dissolves her in floods of tears. Tears, indeed, especially during the first part of the year, are of daily downfall. Tears bedew knotty problems, tears greet the refusal to allow boxes of candy, tears fall copiously when overshoes are insisted upon and when short fur capes are declared insufficient covering for zero weather. Moreover, let the fun run a bit too high, or a mischievous boy tap on the window in the evening, or a mouse suddenly appear, and only a dose of plain English and the valerian bottle prevent an epidemic of hysterics.

But there needs no chorus of school teachers to tell us that our leisure-class girls are lacking in physical endurance and self-control. Most men with a bank account need look no farther than their own and their neighbors' physicians' bills to find abundant confirmation of the fact. Neither is it necessary to dwell long upon the results. They, also, are but too painfully apparent. The mother and the family physician usually agree that the delicate girl must be taken from school. This decision means, in most cases, the end of her intellectual training. A trip to Europe, a little dabbling in music and china-painting, possibly "private lessons" in French and literature—and the young lady is "educated." She knows nothing of the delight in mental activity; her taste for good literature is barely aroused, if aroused at all; she is stone blind to the world of nature and of art;

her brain is about as well fitted to wrestle with hard thinking as the brain of her pet kitten. With her untrained mind, her aches and her nerves, her tears and her hysterics, she mounts the throne in some rich man's kingdom. Does it require a seer to tell how she will govern?

Now, surely, no one, remembering Catherine Booth, and Florence Nightingale, and the unnumbered multitudes of humbler heroic souls, will assert that girls go down before difficulties and shed weak tears over senseless woes because they belong to womankind, whom God made that way. Neither is it natural that a girl of usual healthfulness should become painfully aware that she has a head or a nervous system, as soon as she is called upon to learn a French verb or to solve a problem in fractions. She may hate to study; most likely she does if she has been as unwisely "educated" as most leisure-class girls are, but that alone is not sufficient to explain the ills of the flesh that attend her first efforts to master intellectual difficulties. Some of her discomfort is often, no doubt, imaginary; but even after deducting what she imagines and what she may, if she be not honest, assume for the occasion, we find enough real trouble to arouse anxious questionings as to its cause. Dr. Clarke thought he had found it in the way Nature makes woman. But may it not be possible that these girls are what they are, not because Nature made them so, but because they made themselves so?

It is no simple task to explain this too prevalent physical weakness of the private-school girls. We should need to know not only all their personal history, but the personal history also of their ancestors for several generations, before we could be sure that we had all the data for sound conclusions. There are certain patent facts, however, in the bringing up of girls, that present themselves as a partial explanation of the evil. Putting aside heredity and pre-natal conditions, which, in some cases, may be sufficient to account for all the trouble, but which should be no more operative with daughters than with sons, we see that the girl is very early subject to conditions quite different from the boy's. She is much more confined in the house, she is not supposed to keep arms and legs flying as a boy does, and too soon she is put into clothes whose discomfort her brother would not endure for a day. Imagine him in her stiff, tight corset, and with her heavy skirts dragging upon back and abdomen! Send him out on a cold winter day in her thin-soled kid boots, short-sleeved flannels, and little fur cape that muffles her throat and leaves exposed her arms and most of her body; let him come home to sit over the register and feed on

candy, strong coffee, and cake; then be surprised, if you can, when he finds it difficult to learn his next day's lessons. It is perfectly true that some delicate girls commit not one of these crimes against the flesh; they are shod, and clad, and fed according to the most approved hygienic methods, and still they are not well; but by far the greater number are guilty of them all. Add to these offences the early indulgence in evening pleasures, permitted to most American girls—their clubs, their kirmesses, theatres, and parties, with their attendant evils of nervous excitement and loss of sleep, and is it to be wondered that outraged Nature exacts her penalty?

Perhaps, however, one of the most potent causes of the girl's unfitness for intellectual work is to be found in the different standards of life and achievement set for the son and the daughter. We have not yet wholly emerged from barbarism, in spite of our twenty-six years of women's colleges. It will take many a year yet, many a strong, sweet, wise woman, many a patient struggle on the part of school and college, before we shall be wholly rid of the idea that it makes no difference how a girl is educated. To many fathers and mothers a daughter is still only a pretty thing to be petted in their home—"company" for them, until she goes to be the Nora of her own "Doll's House." "Why should she bother herself with arithmetic, or Latin, or anything else that is difficult? She will never use it; she will never have to earn her own living. If she doesn't care to go to school, let her stay at home," so say her parents. Because it is not a matter of dollars and cents, and because some of us, even in this year of grace, have not advanced one whit beyond the standard of the Miltonic Eve, the education of a large class of girls is still a thing of whims. We need not wonder, then, if, bred in such an atmosphere, the girl allows the most diminutive pain to interrupt her school work.

Physicians, also, are largely to blame for this arrested mental development. Too many of them fail, as they would never think of failing in the case of a boy, to recognize that all human beings, girls included, are dual-natured. In their care for the body they overlook the mind. The first prescription of a large number is, "Take the girl out of school." One physician—in Boston, too—went so far as to add, "And don't make her do anything that she doesn't wish to do." As this was said in the presence of the young woman herself, who was by nature not strongly inclined to activity, the result may be imagined. The pernicious effect of that physician's words was manifest in everything that she did. The slightest discomfort was to her sufficient

reason for shutting her books and retiring to idleness and the bed; and if it was suggested that, as a woman, she would probably sometimes find it necessary to do some things when she did not feel quite well, and that it might be wise for her, as a girl, to acquire some practice in that art, she regarded such a suggestion as stony-hearted. Physicians—not all, happily—seem to forget, when they treat a girl, that, small and weak though her mind may be, it must busy itself with something. Take away from it all healthy work, and, ten chances to one, it will expend its energy in thinking how many aches and woes its owner has—a questionable remedy, certainly. Neither do physicians seem to remember that if they keep a girl out of school between the ages of twelve and sixteen, she is likely to be ashamed to go back to school, if she be well enough then, and begin where she left off. Thus, with a singular disregard for their patient's happiness and usefulness, they ruthlessly condemn her to a life of narrow interests and petty thoughts, a necessity, perhaps, in some cases, but certainly to be advised only as a last resort.

M. Carey Thomas writes from the dean's office of Bryn Mawr:

"I think that, for the present, or until men have learned that for women as well as for themselves intellectual activity is the keenest of possible lifelong pleasures and a safeguard against a multitude of evils, the skilled and sympathetic woman physician, rather than the man, should accompany young girls through their school and college life. She will be less ready to secure physical health for her patients at the expense of intellectual development, and less hopeful of so securing it."

The outcome—partly, it may be, of these barbaric notions about women, partly of the luxury of the time and its resulting lack of moral fibre—is what may be considered the most radical reason for the private-school girl's failure to meet educational demands; the too prevalent idea that a girl must be kept from everything hard. For her there must be no wrestling with difficulty until she force from it its daybreak blessing, "Henceforth thou shalt be known as one that hath prevailed." No; she is only a girl, to be shielded, and petted, and amused, and made comfortable. If she has a hard lesson, she must not bother over it; if she has a little pain, she must go to bed with it, unless, indeed, she wishes to go to a party; if she does not feel like eating bread and beefsteak, she must be given pickles and fruitcake; if she seems restless, the world must be ransacked to find some new pleasure for her; if she suffers a little disappointment, she must unburden her woe to everybody, and cry her eyes out over it. Where

is her chance to learn physical and mental control? Where is her chance for physical and mental health? Where is her chance for happiness? It may be one of the mysterious laws of being, but it is a law, nevertheless, that strength of character, like strength of muscle, is developed only by resistance. The strong souls—and they are the only really happy ones—win their power by what they overcome. Now, all this strength, with its resulting blessedness, a girl must gain in spite of those that love her best, rather than by their aid. Obedience, reverence for law, self-poise, endurance, these that are the natural, easy lessons of childhood, she must learn, if she learn them at all, through womanhood's bitter mistakes and their inevitable penalties. Is it strange that when the poor child goes to boarding school with its thorough work, its wholesome diet, its quiet, regular life, its subordination of the individual wish to the general good, its "You ought and so you must"—is it strange that the result should be what we have seen? A teacher that was asked for statistics regarding the health of the pupils in her school puts the matter very tersely:

"The girls of the wealthy class are far from being able to do good work, on account of their physical condition; but my experience is that children are born with fairly good constitutions. It is the lack of common-sense and the over-indulgence of the American mother, which cause the girl to grow up believing that she is nervous or weak, and must continue to be indulged, and must be tired after the least exertion, and must be nervous over examinations, and all the rest, that make it so hard for us. If the mothers were strong, even mentally, they would put into their children courage and will, which go so far even against poor health. Girls seem to me to have too many imaginary ills, or rather they succumb to the smallest ache; a slight headache is enough to make them give up every duty of the day. Now, while I am not unsympathetic in distress, the greater part of the ills could be overcome if the girls were taught and encouraged at home to be stronger. . . . I think that more than 90 per cent. of the girls that come to us could do a reasonable amount of work if they had the ambition, but as they do not wish to go to school to study, their parents have them excused from one thing or another on the plea of nervousness. Many even wish to be excused from gymnastics. I think there is more laziness than ill health in the world. . . . If we could only reform the mothers we might hope for a better state of things; as it is, we must struggle for the mothers of the future, and if we can make them wiser in their generation we shall not have lived in vain."

Yes; the trouble is with the mothers and physicians, not with the girls. Very rarely, if a girl be given a fair chance, does she fail to respond to a school's honest efforts for her good. After the first restiveness is past, if she be not upset by selfish letters from home and by that necessary bane of school work, vacation, with its physical and spiritual demoralization, she enjoys being governed, and she wakes to

the fact that she is a rational and responsible being with an almost pathetic delight in her new dignity. The girls are all right; the material is excellent. The questions are: Will the mothers and fathers give the schools a chance to use it? and will the schools prove themselves equal to their opportunity? The physicians will, of course, in time, by advancing medical science and by experience be released from their thraldom to barbarism. In any case, there are, and always will be, enough wise ones—men and women, too—to offer a choice.

"Two hundred souls lost, and a few women and children!" The American mother, however weak and ignorant, protests against this satire of Dean Swift's. Let her, and through her let the father, by their treatment of their daughter, no longer give it tacit assent. Let them never forget that she is a "soul born to immortality," not sent into the world solely or even mainly to be a "comfort" to them. She has her own life to live, her own destiny to fulfil, for which she must be fitted or unfitted in accordance with inexorable laws. Of this they defraud her at their peril.

The rearing of infants is becoming a fine art. Infants' foods, infants' diet, even infants' "training and discipline," are demanding the skilled intelligence of physician, mother, and nurse. These are hopeful signs. The mother is learning the connection between sterilized milk and a vigorous baby; between correct habits of eating and sleeping, and good digestion and quiet nerves. Let her learn that the laws of physical being do not suspend action at the end of babyhood. Let her learn, also, that law governs brains as well as stomachs, character as well as nerves. "My leave," said the Frenchwoman, "was not asked before I came into the world." The mother and father can answer this awful suggestion only by freely granting to their daughter her right to her own life in its fullest development. Will they sell this birthright for a mess of pottage? and will teachers ratify the sale? Surely the mother's heart is large enough and the teacher's brain is strong enough to forbid the infamous transaction. But the danger still threatens so long as the standards of home and of school remain what they are.

And just here is the tremendous responsibility of the private school. For the sake of popularity and a living, it has too often repeated and emphasized the mistakes and failures of the home. The common notion of a private school proves this—the notion that is summed up in no rules, little order and discipline, no systematic study, no standards of scholarship and attainment; in one word, few

duties and many "privileges." Yet the principals of these schools are women of liberal education and broad culture, capable of forming and working out high ideals. Their duty is plain. It is to supply what the home training often lacks. They must insist upon obedience, punctuality, wholesome and regular diet, vigorous exercise, proper and modest clothing, good reading, hard thinking, and womanly self-control. If they do, they will be called "strict," and they will probably meet with adverse criticism and pecuniary loss. Very well. Teaching is of too vital importance to be a matter of dollars and cents, and if a private-school principal cannot earn her living by a good school, let her seek some other work. Let her not dare to prostitute her high office and ministry to her own self-support. "Speak unto us smooth things, prophesy deceits," is a demand that has met with too ready a compliance. It is time that private schools joined forces to "boycott" superficial work and lax discipline, in order that parents may be compelled, if they send their daughters to school at all, to send them where they shall be obliged to learn physical and mental control. Invalidism among school girls would then rapidly disappear.

Are there not enough good mothers to uphold the schools in this work? Over against the mother who wept because she found that her daughter's handkerchiefs, when they were sent home from boarding school to be washed, were not stiff with homesick tears, private school teachers can place many a mother whose wise, unselfish love stops at no sacrifice of comfort or happiness to secure the best development of her child. Joy and life, as well as despair and death, are in that terrible saying of Anne of Austria to Cardinal Richelieu: "My Lord Cardinal, God does not pay at the end of every week, but at the end he pays."

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THE FARMER'S ISOLATION AND THE REMEDY.

THAT there is a general and profound discontent existing among the farmers of our country, no one familiar with the condition of the agricultural classes can doubt. Were specific evidence wanting, the tendency of the farming population, especially the younger people, to drift into cities, the disproportionate growth of the rural in comparison with the urban population, as disclosed by the census, and sundry like evidences familiar to all, would dispel any skepticism touching the discontent of this great industrial class. What seems in the nature of a paradox is that this discontent is greatest in the broad and most fertile regions of our country, where the population, relative to the cultivated area, is less than in the more sterile portions where the population is denser.

That a deep and serious disquietude should exist among any class that is an integral part of the industrial body of a people, is to be deplored, but when it pervades a body that is the most important numerical and commercial factor of this or of any other people, it becomes a matter of deep national concern and even of alarm; and to search for the cause or the causes of it becomes a public duty. For behind this, as behind all other phenomena, it is to be presumed an efficient cause exists. It seems to me that the disquietude of the farmers cannot be sufficiently disposed of, as some believe it can, by pointing to the very evident fact that the farming class of to-day, as compared with that of some decades in the past, has advanced to a higher plane of life; for to any one familiar with the internal condition of all classes of our people, agricultural and non-agricultural, it is evident that of the marvellous advance in comforts, conveniences, and luxuries that through the agencies of the sciences and arts has come during the past generation the world over, the farmers have shared in the benefits to a less degree than any other class. Indeed, of the sum of human advantages which is the product and property of the age, he has relatively less as his share than he formerly had; and the discontent becomes the greater because it is evident that the very agencies that have brought about this marvellous and rapid advance in the general well-

being, have also brought into more direct contrast than formerly, any class differences that may exist.

If this proposition needed the support of evidence drawn from an economic source, it is ready and abundant. We need but to point to the fact, as shown by the statistics of our country, that in the past twenty years the growth in the total wealth of the non-agricultural classes, as compared with the wealth of the agricultural classes, has been, out of all proportion, greater than the increase of numbers of the former over the latter during the same period. Competent statisticians estimate the growth of wealth in the whole country during the past twenty years at about $25,000,000,000. By the census of 1870, the value of farms, implements, machinery, and live stock in the United States was $11,123,946,150, and by the census of 1880, it was $12,104,108,141, showing an increase of $980,151,991 in the decade from 1870 to 1880.

While as yet there are not sufficient data to determine the growth of agricultural values throughout the United States for the decade just closed, there is no reason for believing that there was any very substantial increase over that of the preceding decade; for it must be borne in mind, that the latter portion of that decade marked what was perhaps the era of the lowest prices and most depressed condition of agriculture our country has yet seen. Allowing, however, for an increase of 50 per cent. for the decade of 1880 to 1890 over the previous one (which, under the conditions, would seem liberal), this would give an increase for the decade just past over the previous decade of $1,500,000,000. The two decades from 1870 to 1890 thus show a total gain of about only $2,500,000,000, or only about one-tenth of the increase of the total wealth of the whole country.

To emphasize the significance of these figures and the inference from them, it is necessary only to call attention to the fact that nearly one-half of the entire population in this country is engaged directly in agriculture.

As bearing still further upon this proposition it may be well to give passing notice to the fact that in the decade from 1850 to 1860, when there was presumably a normal and co-ordinate increase in the wealth of all the industrial classes, and when the population of the whole country was but little more than one-half of that during the decade from 1870 to 1880, the census shows that the absolute increase in farm values was more than four times the increase shown in the decade from 1870 to 1880.

Thus the value of farms, farm implements, machinery, and live-

stock, as shown by the census in 1850, was $3,967,343,570 and in 1860 it was $7,980,493,063, showing an increase in that decade of $4,013,-149,493. The census of 1870 shows that the value of farm implements and machinery and live-stock was $11,123,944,150, and in the year 1880 it was $12,104,108,141, or a gain of less than $1,000,000,000 in round numbers for that decade. The population of the United States in 1850 was 23,191,876, in 1860 it was 31,423,421. In 1870 the population was 38,558,371 and in 1880 it was 50,155,783; thus, with a gain of nearly 20,000,000 in the population for the twenty years between 1860 and 1880, there was a gain of $4,123,615,081 in agricultural values, an amount only a trifle in excess of the gain in agricultural values for the one single decade between 1850 and 1860, when the population of the whole country was but a little more than one-half of that of the former period.

To the serious inquiry, as to the real cause or causes of this inequality and consequent discontent, and as to whether they are permanent or temporary and therefore capable of removal or amelioration, no general answer will be given, nor can it be reasonably expected; for, no doubt, there exists a multitude of causes for an effect so great. Every inquirer will be largely influenced by impressions formed, or, perhaps, in some degree by a bias engendered by self-interest or by the conditions under which the subject has been considered. While in my own view there seem to be many and marked causes for this discontent, the dismal experiences of my early life as an agriculturalist leads me to refer the difficulty in great measure to one dominant and conspicuous cause. To my mind, therefore, the chief difficulty of the farming class arises from the lack of association and co-operation, the lack of united effort, the diffusion rather than the concentration of energy. Not only does this lack of organized effort result in much misdirected energy and consequent economic loss, but it works an even more serious injury by placing the farming population at a disadvantage in the great industrial contest in which other and co-ordinated industries, by virtue of their capability for thorough concentration and organization, have a superior advantage.

It seems to me that the American farmer has not yet mastered the problem of combined action; consequently he has not yet fully "realized" upon his energies. Under the system now practised, each separate farm-house is an isolated community and a law unto itself. The economic loss, however, is but a trifle compared with the woeful waste

of social energy. From this waste comes the hunger of the heart and too often the atrophy of the intellect. From this, too, comes that abiding soul-weariness suffered by so many farmers and still more by so many farmers' sons, and, worst of all, by so many farmers' wives. For it is one of the saddest features of this wretched isolation that the farmer himself often gets used to it by middle life; it becomes so completely second nature that he forgets that it was not his first nature. He complains because his sons wish to go to town, and he thinks his wife very unreasonable because she is not satisfied with "a good home and a good provider." If an argument is made with him on the subject his last word usually is that she does not have to work any harder than other farm women. Indeed, she does not, and there is the pity of it.

Allow me to sketch an average poor farmer's family in the West—I will say anywhere within 200 miles of the Missouri River. Tom Miller worked hard on an Ohio farm from the age of twelve until he was twenty-five. He then married and succeeded in reaching the "new lands" and in getting his quarter-section "homesteaded" and his so-called habitable dwelling built on it. When he "swore it in" at the land office as a "habitable dwelling" the visiting critic from the Atlantic coast sneered, "That's the way the government is defrauded"; but habitable or not, Mr. Miller has lived in it ever since. He is not given to drink, and his only extravagance is tobacco. He married a fairly good-looking farmer-girl in Ohio, and she has worked—it would be nearer the truth to say has "slaved"—on that prairie farm ever since; and how little has she had to show for it! Both have struggled in almost hopeless toil fifteen years in mud, and sun, and wind, and rain, and snow. His farm is mortgaged, his hands are hard, all the poetry and the sentiment of youth have long since gone out of him, and, worst of all, he has become used to it.

Nevertheless the neighbors discuss his case as well as their own. One who came with a few thousand dollars and has added to it by loaning on mortgages, says, "The trouble is extravagance. They buy too much high-priced machinery and do not work it." Another says, "It is the circulating medium—there isn't enough money." Still another says, "The railroads get it all, and what the railroads don't get the middle men do;" and nearly all have something to say against the national banks, the trusts, and sometimes even the government itself, but all these together are only a minority. Let eastern men think as they may; it is a minority, and a small one indeed, in the

West, that is ready for a general financial and industrial revolution. The solid and conservative farmer, the middle-class man, simply says, "I'm blessed if I know; things get worse and worse; the more corn and wheat we raise in any one crop, the less we get for the whole of it, unless they have a failure of crops or get up a war in Europe. God knows I hate to depend on the like of that; for I wish them no harm in Europe, and if a war does make good prices for a year or two (as they say it does) why, war's waste is bound to work back on us a year or two later. The hardest times we have ever had in this country have always come after the biggest wars in Europe; and, as to machinery, we just simply have to have machinery to produce and save our crops, and then the machinery eats up all the profits. Any agent can take out a pencil and prove that you save money by buying the machine, but it don't work out so in practice."

So much for Mr. Thomas Miller; but what does Mrs. Miller say? Here is the situation that moves the heart of the sympathetic observer. She simply says nothing, for

> "Care, and sorrow, and child-birth pain
> Have left their traces on heart and brain."

Every day of her life she goes through the dreary, monotonous round. At an early hour, every morning through the hot summer, she prepares the same black coffee and fried pork (perhaps hot biscuits), and before she can clear away the breakfast things and make the bed, she hears the calves bleating, the milk-cow stamping, both impatient to have the morning's business done with. Then comes the dreary routine of the forenoon's work, the baking of bread, the washing, and the like, until the meridian sun warns her that the everlasting mid-day meal is due and must be ready at once. To round up the duties and responsibilities of the day her labors are carried far into the night and often, very often, they continue long after those of the male portion of the family have ended. She has long since ceased to think about her personal appearance. A tender kiss from her husband would almost surprise her. Once she grieved that her little girls were so barely clad; now, she scarcely thinks of it. That she should have a spare hour every day to read never enters her head, and the bare suggestion that on every Sunday she should "dress-up" and devote herself, during the rest of the day, to social intercourse would cause a stare of incredulity. For be it understood that Sunday for the farmer's wife is a sort of clearance day to adjust the odds and ends of the previous

week's cares and labors to be in readiness for the renewed labors of the coming week.

Of course, some one rises to remark, this is a fancy picture. I would that it were so! But one has only to plunge into the depths of a purely agricultural district, especially in the West, remote from city or town, to find that it is a reality in thousands of homes. Fortunately there are very many families in better condition. There are farmers' wives who keep "help," and have separate rooms and cool, airy bed-rooms, and leisure hours on Sunday, and occasionally a comfortable carriage to go to church in; but with the so-called lower middle classes it is as I have set it down. They are frequently crowded together in small rooms as unhealthily as the poor in the cities, and by day they are overworked, in summer they are chronically overheated, and in winter pinched by cold and roughened by exposure, while at all seasons they have (worst of all evils) monotony and loneliness; else why do the insane asylums hold such an enormous proportion of farmers' wives? But enough of the diagnosis, and now to the remedy. The causes are no doubt many, but the main one, in my opinion, as I have previously said, arises from the diffusion instead of the concentration of energy. There is isolated and individual toil where there should be, and might easily be, associated effort. Families might work together and secure enormous gains both by the lessening of toil and expenditures and by an increase in product.

It is the general law of evolution and growth, that like units segregate into special groups and bodies, making an organic structure. So in the world of labor we find a marked tendency toward specialism and subdivision, the marvellous results of which that have already been gained point but to the still greater benefits yet to come from a more perfect adjustment and relation. We have but to look about us to see numberless proofs of the vast extent to which human happiness has been increased and misery lessened, by this crystallization and grouping of the crude elements and materials of human life and society. In manufacturing and cognate enterprises the subdivision of labor alone has almost worked miracles. Now, must we believe that in American agriculture alone there are such conditions as to prevent its crude elements from adjusting themselves in a like natural relation, from which like benefits may be expected? To understand how little advancement our farming classes have made in this direction, it is necessary only to see under what peculiar disadvantages most of the household and farm labors and duties are carried on.

Under the isolated system of farming, as practised in our country, not only must one set of utensils serve diverse purposes, and as a consequence help to a lessened volume and lower quality of work, but inasmuch as the appliances are not made to perform the fullest work, there is an amount of capital invested disproportionate to the result when measured by the standard of achievement in other branches of industry, and far in excess of that which would be necessary, under a better system, to yield the same results. Thus each farmer is under the necessity of being self-contained; he is obliged to invest in many kinds of appliances for which he has only a limited personal or family use, but which under different conditions might be utilized to produce far greater results, if applied to the wants of a whole community.

Let us consider a hypothetical case; let us assume that the now isolated farmers of a tract five miles square are gathered into a central farm village, of say one hundred families. The gains under such a system, it seems to me, would be of three kinds: the purely physical, decreasing labor and increasing product; the intellectual; and, most important of all, the social and moral.

I. In such a village the tendency would be toward a subdivision of labor and toward a specialization of industries. The village well, the village cistern, the village bath-house, and many such things may be passed with a mere reference; for, as to these, experience and the nature of the locality will decide. But I must mention the fact that one wind-mill in any of the prairie States would raise an abundance of water for the one hundred families, thus saving the expense of many wind-mills and the slavish labor, at the well, of one hundred women. I will go somewhat into detail regarding the gains in the more important specializations which I consider would certainly result.

In the village laundry, built for the purpose and properly equipped, a few persons could do the washing for the village with less exhaustion than one woman now does it for a single family. And then the misery of washing-day in the isolated farmhouse—but I forbear; poets and wits have exhausted that subject.

The village bakery—all that I would say about this is already proved in the experience of many American villages and of all French villages. And so far has domestic economy been carried in France that in many a hamlet too small to support a bakery the women make up their own dough and send it to a central oven to be baked; and the saving in fuel, in labor, and in other ways, even thus secured, fully justifies this rude advance toward organized effort.

As it now is on most farms, one room, one stove, one set of utensils, must be put to all sorts of uses, fit or unfit. The farmer's wife and her daughters must cook, bake, wash, clean, iron and, worst of all, live, in one or two rooms; and on a rainy wash-day even the living room and the halls (if the farmer is rich enough to have halls) must be used for drying, where, as Mrs. Barbauld says:

"The cold wet sheet flaps in their face abrupt."

Not less important in labor-saving, and even more important in the matter of health and comfort, is the village butcher. A strangely prevalent fallacy is entertained by most city people on this point. As their own meat comes from the country they naturally assume that the farmer gets his meat at first hand; yet to a limited extent only is this true. Even among the well-to-do farmers fresh beef, pork, and mutton are eaten scarcely one-fourth of the year. From March to December they live almost entirely on salt pork with an occasional "treat" of fresh mutton or chicken. The reason is obvious; butchering is, with their facilities, extremely expensive and always disagreeable; and, as one family cannot at once use an entire animal, the surplus must be sold or pickled. Even now many a prosperous farmer sends to the nearest village almost weekly during the summer for fresh meat, being utterly sick of the preserved or salt meats put up the previous winter. The butcher of the farm village could serve the one hundred families daily with fresh meat, at no greater cost than they now get their salt-junk by putting it up themselves. The village nurse in case of sudden sickness is worth considering, but the greatest gain would be in securing leisure for the wife and mother to do the nursing. The village horse-doctor, the village blacksmith and tool-repairer—all these I need but allude to. The farmer employs them now—he is obliged to—but at great loss of time, which might be better spent. Another subject worthy of more space than I can give it here is domestic help. The social life of the village being more attractive than that of the farm, it is apparent that such help would be more easily secured. A marked economy will be obtained by having the village grocery, where even the daily needs of sugar, coffee, and tea can be supplied at once; because the farmer has to provide for his wants for a long period by laying in a large supply.

The village streets, roads, and pavements are worthy of consideration. "Working the roads" is one of the standard jokes among farmers, and the day of idle lounging and pretense of work is too

familiar to need description. But, when the farm village once becomes accustomed to acting as a unit, might not this matter be greatly improved? There is certainly one comforting fact; it could not be worse. And, of all public improvements, the common roads are the most important.

Another very important and natural outgrowth of the farm village would be the creamery. This branch of local manufacture is already a cheering success in many sections of the prairie States. Instead of the small churn in each family and the petty worries which exhaust and exasperate the farmer's wife, each family could deliver its milk at the village creamery and receive its butter in return at less cost, measured in labor, than now; for it is self-evident that a building made for the purpose and properly equipped would vastly reduce the labor. The village ice-house, and a multitude of other aids to comfortable living, would speedily and naturally come into existence under the impulse of concentrated and current demand.

II. In an intellectual way the list of possibilities stretches to a great length. The village club and evening school, the village schoolhouse, the library, the music-hall, and the reading room—why should not all these come as natural products of associated effort? Are we to believe that there is something in farm life and work which necessarily forbids the development of those conditions which sweeten and brighten human life in most other pursuits? Is the farmer doomed to have a poorer social life than men of other vocations? Must his family suffer even more than himself? And must the inevitable question be despairingly asked, "Why *don't* the boys stay on the farm?"

Why do they not? The answer is self-evident—perpetual toil in good weather all through the busy season, and perpetual loneliness in bad weather and most of the winter season. The time when the farmers have leisure is, in half the country, the very time when they cannot get away from home by reason of their isolation and bad roads; yet such is the hunger of the heart that the boys revolt against this unendurable loneliness and even now often walk miles through the rain or the snow to spend half a day in sitting around the stove in the country store. Already, in many sections, the young people of both sexes have broken through the barriers and established farmers' clubs and little societies of one sort or another; and improved roads have done much to aid this relief. But why should not this natural tendency be reasonably directed, and all ages and both sexes enjoy their long winter evenings together?

The village church being near at hand and easily accessible, the habit of attending it would be greatly stimulated; the music and the atmosphere of quiet mental calm even now make it attractive to many not directly influenced by religious motives; and surely it is well that religion should call to its aid all innocent forces, especially such as affect the young. In the long catalogue of advantages secured by the farm village and its associated energies, many will place the quickening of church life as the first. The habit of mingling together, and the discussion of public and other questions, would soon arise with the good effects of mental attrition. "Iron sharpeneth iron; so a man sharpeneth the countenance of his friend."

The debating society would become a permanent institution, instead of being, as now, kept alive with difficulty in some remote schoolhouse through a few winter weeks. A wholesome rivalry between adjacent farm villages would inevitably arise as their best debaters contended; and the ambitious young lawyer from the county-seat or the ambitious student at home for his vacation would find an audience alert and sufficiently critical; and—what is of more importance—they would live near enough to the meeting-place to get there without a long night ride.

III. All these lead up to the social advantages—possibly the greatest of all. I have noticed that in many cases half the fatigue of the day is dissipated by the social intercourse of the evening. "All work and no play makes Jack a dull boy." It certainly made me one. My experience teaches me that this adage applies, however, not to the boy only. Every man who rides has noticed that his horse will go more freely toward home, and go a longer distance with the same amount of fatigue, than he will go from home. And is it not a part of military science that men keeping step to the measured notes of martial music march more easily than in silence? It is the concentration as against the diffusion of social energy. Another very striking illustration forces itself upon my memory. I give it here as my own experience, but I know it is the experience also of every man whose boyhood was passed upon an isolated farm in the West. To such a farm there came by accident a man who had travelled in Mexico, and mined in California, who had visited the cities of the Atlantic coast, and who could talk abont distant scenes and strange people. And what a godsend his coming was! What a relief to the dreary monotony of the farm! How eagerly the boys listened to his talk, and after he had gone how often they spoke of him and wished for

his return! Is there any man who was a farm-boy in the Wabash valley in 1850–60, who does not remember "the man who had been to New Orleans on a flat-boat," or "the man who had fought in the Mexican War?" He brought to them the "otherness," as Dr. Edward Eggleston puts it.

At this point I may be pardoned for a further digression to narrate my own early experience. With very short intervals, my life, up to the age of twenty-three, was passed on a farm in the Wabash valley. We suffered every disadvantage that the isolated farmer's family now suffers, and many from which most are now happily exempt. One of the saddest memories of my early life is connected with the fact that domestic help could not be procured in a sudden emergency, and as a boy I was often dismissed from labor in the field to help my mother when overwork or sickness had partially disabled her. The first great break in the round of our secluded life was when the district school system was established and when, from far New England, came a lady to teach in our country school. This "Yankee school-ma'am" brought what then seemed to me great stores of knowledge of the outside world and marvellous riches of science; and when she told of the great ships and the great ocean, the cities and the railroads, and explained the marvels of the microscope and telescope, it was as if a great rift had been opened in the cloud, a new faculty added to the brain; for she brought the "otherness" indeed. And while I was yet agitated with the boyish delight of hearing her and full of eager curiosity to learn more, the township libraries of Indiana were established.

I do not know who secured the law to establish these libraries, but may every blessing rest on him! For he did a wonderful work, and the man or committee who selected the books had a genius for the task, which rose to an inspiration. How many rainy days, how many long winter evenings, how many noon hours, did I spend in poring over the Abbot histories, the narratives of travel, and those books in which scientific principles were popularly explained! The recollections of the vast benefit and pleasure I derived from that little library—a mere handful of books—to which I trudged a long distance through rain and snow to get an occasional coveted volume, leaves the firm conviction in my mind that the benevolence and wisdom of man cannot devise a more beneficent instrumentality than some general scheme whereby instructive and entertaining books may be made readily accessible to the youth of the rural portions of our country.

While the possible ultimate condition of American agriculture, as

herein briefly and hastily sketched, cannot justly be regarded as Utopian in the face of the many examples of successful village farming throughout France, Germany, Switzerland, and other old countries, still, in view of the peculiar physical and social conditions that have been developed in this country, it might be indulging an unwarrantable expectation to hope that similar beneficial results will be realized here from a like system. Still as the lamentable fact exists that our great agricultural interests are, to a great degree, in a state of unstable adjustment with the other factors and elements of our life that make up the industrial, commercial, and social body of our people, and as it is evident that just and stable adjustment therewith would result in vast and permanent benefits to our country, the trial of any scheme, having for its purpose this great object, even if it should result in partial or complete failure, would, it seems to me, be amply justified in the patriotic endeavor to aid in the accomplishment of so great and desirable a work.

JOHN W. BOOKWALTER.

Mr. Bookwalter is now preparing to demonstrate how the need that he has pointed out in the foregoing pages may be supplied, by establishing farm-villages in Nebraska. The first of these will be built on a tract of 12,000 acres in Pawnee County. The land will be divided into 150 farms of 80 acres each, and in the centre of the tract will be a village consisting of 150 houses, one house for every farm.—ED. FORUM.

AUTHORS' COMPLAINTS AND PUBLISHERS' PROFITS.

From the very beginnings of literature there has been a more or less continuous stream of complaints from authors who have felt themselves aggrieved, on one ground or another, against the men through whom their productions have been brought before the public. These authors have, in not a few cases, convinced themselves, or at least have endeavored to convince others, that if they failed to receive from the public what in their opinion was an adequate return for their productions, such failure was chargeable not to any want of substantial merit in their works, but to the lack of effective business service on the part of the publishers, or to the tendency of the latter to absorb for themselves an undue proportion of the receipts.

Complaints of this class begin as early as the time of Martial, who was a most persistent grumbler. He indulged in the luxury of having not less than four publishers at one time, and took occasion to include invectives against them all in satires or epigrams, which the publishers obligingly continued to publish for him. Horace, too, complained that his publishers, the Sosii, took to themselves the gold produced by his writings, leaving for "the author's reward only fame in distant lands and with posterity;" and even Cicero was not always ready to be satisfied with the reports of his valued friend and prince of publishers, Atticus. In modern literary history, the names of Milton, Johnson, Goldsmith, Voltaire, Balzac, Heine, Byron, the elder Disraeli, and many others will at once recur to mind as having left in their books or in their correspondence more or less acerbitous criticisms of their publishers. And to bring the record down to our own days, that charming writer and true-hearted humanitarian, Walter Besant, while speaking of his own business relations as being entirely satisfactory, has been taking up the cudgels most vigorously on behalf of the oppressed class of literary workers, and has shown most eloquently, if not quite convincingly, that in the publishing business as now carried on, there is no risk, and that the substantial profits of the same are absorbed by the grasping publishers.

Such a long series of complaints from literary workers of many

generations constitute on their face rather a serious indictment against the fair dealing of publishers, but before deciding that a good case has been made out against them, one or two considerations are entitled to attention.

It is proper to remember, in the first place, that nearly all the narratives of such differences as have arisen between authors and publishers have come to us in *ex parte* statements. In the exceptional instances in which the answer of the publisher is placed on record, a very different shape is usually given to the case. To take a modern instance, the readers of Lockhart's "Life of Scott" are left with the impression that the ruin of the great author was principally due to the mismanagement of his business interests by the publisher Constable, and that if Scott could have secured the full returns from his magnificent literary properties, returns which were in part squandered in Constable's speculations, his last years would not have been harassed with financial cares, and shortened by over-work. When, however, in the memoirs of Constable, we have placed before us the full statement of his transactions with Scott, we find that during nearly the whole course of their relations, the author's unbounded optimism had led him to make drafts upon profits not yet earned, and even to call for large advances against books still to be written; so that at the time of Constable's failure, Scott was actually in debt to his publisher for nearly £10,000, representing money advanced upon manuscripts still to be delivered. It seems probable that this sum would have been adequate to save the publishing firm from failure, a failure which was said to have been the chief cause of Constable's death a year later.

Scott's magnificent struggle through the later years of his life to redeem all his business obligations, including as well the repayment to Constable's creditors of the £10,000, as the settlement of the still larger sums for which he was liable as a partner in Ballantyne's printing concern, may well have been intensified by his regrets for the optimistic heedlessness which assuredly had had not a little to do in bringing about the ruin and the death of his first publisher.

The recently issued memoirs of John Murray the second give not a few instances of serious losses incurred by the publisher from works from which, according to the belief of the authors, he had, notwithstanding liberal payments for the copyrights, secured the larger share of the profits. It is interesting to note in these volumes the various little side-lights which are thrown upon some of the well-known

names of literature, like Moore, the Disraelis, Coleridge, and others, who imposed not a little on the trusting liberality of the great publisher, and who are shown to have been often ready to take money without an adequate *quid pro quo*, or even without any *quid pro quo* at all. The impression is also left throughout the memoirs that they are, as an Hibernian might say, "full of kindly reticences" and that if the note-books of Murray had been transcribed more fully, a much more considerable balance would have been shown to be due from the literary workers to their business agent for unprofitable work, for over-paid work, and for work paid for and not delivered.

Washington Irving was one of the kindliest of men and one of the most modest and least self-asserting of authors. It is evident from Murray's memoirs, however, that Irving was led (apparently, according to his own "Letters," by the counsel of over-zealous friends) to place too high an estimate upon the commercial value of some of the earlier of his writings, and that Murray, having over-persuaded himself to accept the author's estimate, became a heavy loser by the publication of some of Irving's most famous books. Irving's later arrangement with his American publisher, the late G. P. Putnam, under which the publisher, in place of speculating in the volumes by paying at guesswork advance prices for their copyrights, paid a royalty on the copies actually sold, proved much more satisfactory for both author and publisher, and produced for the author and his heirs a substantial income extending over thirty years.

The list of memoirs of publishers is at best but a small one, and of all of them it can, I think, be said that they have laid stress upon the pleasanter phases of the relations between the publishers and their clients, and have, as a rule, not thought it worth while to bring into literature the publisher's record of literary contracts unfulfilled or of publishing confidences imposed upon, a record which might assuredly have been made a long one.

It is to be borne in mind, in the second place, that these *ex parte* opinions come to us from members of a *genus irritabile*, whose perceptions of the facts and equities of business transactions must in any case be taken with allowance, and of whom some at least, such as Voltaire, Balzac, Heine, and others, can hardly be trusted to tell straight stories of matters in which either their interests or their vanity were involved.

It is further to be remembered that, while the transactions between authors and publishers would now aggregate a very consid-

erable number (equal, of course, to the total number of books published), the public has its attention called to those instances only in which the authors have imagined themselves to have grounds for complaint, or texts or pretexts for satire; and in reading about these it is easy to forget how very inconsiderable a proportion they must bear to the long list of transactions concerning which the authors had no criticisms to make, whether well founded or otherwise. The hundreds of thousands of cases in which the authors have, through the successful co-operation of their publishers, received from the public a satisfactory return for their labors, give no texts for satirical chapters in fiction, no themes for fierce onslaughts in reminiscences; they remain naturally and of necessity uncommemorated.

And finally, it is proper to remember that publishers are the only class of business men whose sins, real or imaginary, come into literature. Their clients have the ear of the public and sometimes of posterity, and are likely enough to assume that the details of their personal concerns and grievances are as interesting to their readers as they may have been important to themselves. If the complaints against lawyers, bankers, physicians, and merchants, on the part of their respective clients, were in like manner from time to time put into literary form, the misdeeds of publishers would, in comparison, sink into absolute insignificance.

It would, of course, be absurd to contend that there have been no such misdeeds. I simply contend that, so far as we can judge from the trustworthy evidence, the balance of any "misdeed account" between themselves and their authors would not be against the publishers, and more specifically, that the authors have not, as a whole, paid for the service of getting their works before the public a larger proportion of the proceeds of literature than was needed for the organization and support of the skilled machinery requisite.

That portion of the publisher's business which is based upon the sale of books out of copyright, literature which has fallen into the "public domain," can of course not be taken into account in any consideration of division of profits between authors and publishers. There may well be question whether the term of copyright throughout all the states of the world should not be extended to the longest limit conceded by the countries giving the largest recognition to literary property (such as Spain, where the term is for the life of the author and eighty years, or France, where it is for the life of the author and fifty years). Such an extended title would enable a suc-

cessful author either to leave for his heirs, if he chose to hold on to his copyright, a continued property, or to secure for such copyright, if he preferred to sell it outright, a more satisfactory price than can be paid in the United States or England, under the present inconsiderable protection (twenty-eight or forty-two years in the former, and seven years from the death of the author in the latter). But for the inadequate protection given by the present English and American laws to literary property, the publishers are of course in no way responsible, as they have themselves always favored a longer term.

With this general word concerning the responsibilities of the past, I have now to consider the principles and methods which are at present in practice for the division of the profits of literature. I am inclined to take the ground, in the first place, that the matter is one with which the public has no proper concern, and in fact that without full information concerning the cost of manufacture of books, the expenses of distribution, and other technical business details which it would be impracticable to present, no proper understanding can be arrived at concerning the accuracy of any statement of the results secured from the sales of books, or of the equity of any method of division of these results.

I can but think that not a little injustice has been done to authors, as a class, by the readiness with which some few among them have paraded their grievances before a community that was in no position to arrive at a correct judgment upon issues which could at best be but partially presented, and for the adjustment of which, even if they were fairly understood, the public possessed no authority. Why should Canon Farrar appeal to the public for sympathy because his publishers had made more money than himself from the publication of a book which he had written "to order" under their suggestion and contract, and for which, according to the statement of the author himself, he had been paid a good deal more than his contract price? Why should authors, presumably of adult age and sound minds, plead the "baby act" in regard to their contracts (or their failure to make contracts), any more than the clients of lawyers, architects, or stock-brokers? Persons who, whether through their own bad judgment or through the wrong counsel of their advisers, pay more for their house-building than they had intended to, or who find themselves losers instead of winners in litigation or in financial speculation, do not burden the public with their complaints, and, if they did, would certainly be laughed at for their pains.

It is my further contention that it is not practicable with productions varying so largely as books in their origin, character, and commercial possibilities, to arrive at any uniform rule or practice as to compensation for the writers, or as to the division of the profits, when there are any. It must nearly always be necessary to judge each case for itself, and to arrive at a separate arrangement for each book.

In laying down the principles which in his judgment should determine the compensation of authors, Mr. Besant, for instance, has the habit of taking as a typical example "our old friend, the six-shilling novel, of which not less than 10,000 copies will be sold." But Mr. Besant's impressions of the salability of the six-shilling novel are evidently based upon his own experience with such deservedly popular stories as "All Sorts and Conditions of Men," and "The Children of Gibeon." Far from being a normal instance, suitable to take as a basis for general calculations, the six-shilling volume of which 10,000 copies can be sold is a decidedly exceptional publication, and the number of books possessing this desirable quality would constitute a very inconsiderable percentage of the four or five thousand works issued each year in England, and a still smaller proportion of the three or four thousand annual issues of American publishers.

As is probably already understood by all having any special interest in the subject, there are three general methods of publishing arrangements—methods which are, of necessity, subject to a number of variations as to details.

1. The publisher assumes the entire risk and expense of the production of the work. Under such an arrangement the compensation or return to the author will take one of the following forms: (*a*) A royalty (usually a percentage on the retail price) either on all the copies sold, or on all the copies sold after enough have been sold to return the first manufacturing outlays and to insure the undertaking's producing some profit instead of a deficiency. In this case the ownership of the copyright of the volume continues to be vested in the author. His agreement with his publisher may be made either for the full term of the copyright, or for a briefer period, such as ten years. If the latter course has been adopted, the author is in a position, at the expiration of the agreement, to make a fresh (and possibly a more favorable) royalty arrangement. If author and publisher fail to agree upon a renewal of the arrangement, the former can either himself purchase the plates and the remaining stock, or can induce some other publisher to make the purchase. The selling value of the

plates and copies can be arrived at by appraisal. (*b*) A payment made by the publisher on the publication of the book, in full purchase of the copyright. This method is somewhat more likely to be used in the cases of books written at the instance of the publishers, or "to order." (*c*) A minimum payment made by the publisher on the publication of the work, or at some specified date thereafter, with an additional payment or payments after a certain sale has been obtained—say of 5,000 copies or of 10,000 copies. When the final payment called for by the agreement has been made, the ownership in the copyright passes from the author to the publishers. (*d*) The payment to the author of a fixed proportion (usually one half) of the net profits secured from the publication. If the sales prove insufficient to return the publishing outlays, so that there are no profits, the author receives, under such an arrangement, no compensation for his labor. The value of this labor has, in fact, if reckoned by a commercial standard, proved to be a minus quantity.

2. The author assumes the entire risk and outlay of the production of the edition, and remains the owner not only of the copyright, but of the copies printed, and of the plates, if any plates are made. It is in order for an author, before giving instructions to put the book to press, to have submitted to him by the publishers estimates of the cost of the editions proposed, upon which estimates the agreements will be based. Under such an arrangement, the publishers render returns to the author for copies sold at the net price received by them from the wholesale dealers, less a publishing commission, usually fixed at about ten per cent. of the retail price. If a book is published at $1.00 and sold to the wholesale dealers at 60 cents, the author will, under such an arrangement, receive for each copy sold 50 cents, or $500 per thousand. When a book is in this manner published "for the account of the author," the outlays for advertising, circulars, etc., are debited to the author, and are deducted from the payments made to him for sales. An agreement of this kind is made for a term of years, at the end of which term the author, owning the plates and copies of his book, as well as the copyright, is at liberty (if it may seem desirable) to transfer the publication to some other publisher.

3. The risk and the expense are divided between the author and the publisher, the most common method for such division being for the author to pay the cost of the type-setting and stereotyping, including that of any illustrations, and to receive, in addition to the royalty for his copyright, a further royalty for the use of the plates, of

which he remains the owner. An author owning the plates as well as the copyright, is, of course, in a position at the expiration of the term of agreement, to take the publication of his book out of the hands of the original publisher, and to transfer his plates to some other house.

For a publication which is the first production of its author, the name of the author carrying as yet no weight with the reading public, the most frequent publishing arrangement is that under which the author bears either the whole or a part of the investment required. For a book by an author already favorably known, for which there appears to be fair prospect of sale, the most usual publishing arrangement, at least in this country, is that under which the author receives a royalty on the copies sold, his final receipts being in this manner made directly proportionate to the success of his book. This royalty method is now becoming more frequent also in Great Britain. It has, however, been quite a general practice with British publishers to purchase for a fixed sum either the entire copyright, or the copyright for a term of years, or the copyright of one or more editions. Such a purchase must, for the publisher, be a speculative venture, in which, to the outlay necessarily put at risk in the manufacturing of the edition, is added the amount of the payment guaranteed to the author.

Another form of arrangement prevalent in Great Britain is the "half-profit" system, which, while in theory equitable, is in practice accompanied by serious disadvantages and friction.

It is necessary, in any consideration of publishing arrangements, to bear in mind that a very large proportion of the publications produce a loss instead of a profit, a loss which has to be provided for in some way. According to a calculation in the "Publishers' Weekly" a year or two back, more than one half of the American publishing undertakings of each year resulted in loss, and only about one fourth actually produced a profit.

Another consideration is the origin of the book, that is, the way in which it came into being. A very considerable proportion of publications are the result of the planning and suggestions of the publishers, and except for this planning, and often for preliminary investment on the part of the publisher, would never have come into existence at all. In some cases books are thus prepared under the request or instructions of the publisher, to be included in a series, like the "International Science" series, the "Leisure Hour" series of novels, or the "Story of the Nations" series of histories. Such a series may be the result of years of planning, of labor, and of expenditure on the part of

the publisher, and may properly be called his undertaking, as it is in large part his creation. The sale of any volume issued in the series is only in part due to its intrinsic merit or to its own attractiveness, being in part brought about by the prestige already secured for the series as a whole.

The relative influence upon such sale of the two factors, the prestige of the series and the (commercial) value of the individual book, varies, of course, according to the history and success of the series and according to the repute of the different authors and the effectiveness with which they have executed their several contributions. To an author not previously known, the opportunity for bringing his work before the public in such an association may be of very material advantage, apart from the question of his direct receipts for his own volume; while even an author whose writings already have currency with the public, may be pleased to secure the additional returns that can usually be depended upon for a book issued in a well-planned series, as compared with those of a single volume standing for itself.

What is true in the case of a series applies, to a certain extent, to that of a publishing imprint apart from a series. Whatever may be the intrinsic merits of a work, it is evident that it will stand upon a different footing before the public and will have a much better prospect of sale, if it bears a publishing imprint already favorably known in connection with similar literature, than if issued by some new firm which has its reputation still to make A very simple calculation will show that an author may secure a larger return from a royalty of 10 cents a copy, on a sale of 10,000 copies, than from 12½ cents on one of 5,000. In estimating, therefore, the probable relative advantages of propositions from different publishers, the author should take into account not only the rate of royalty, but the value for his purpose of the publishing imprint, and the probable efficiency of the distributing machinery which is to be utilized for his book.

The method under which a book is to be sold is another consideration which affects the rate of royalty. On a work published "by subscription," and sold exclusively through canvassers, it is, as a rule, not practicable to pay as high a royalty as is customary for one sold in the regular channels of the book trade, that is, through the book stores, for the reason that the publisher himself receives on the copies sold, a smaller proportion of the published price. The publisher is not in a position, therefore, to offer to the author as high a rate of royalty as can be given on books giving a greater net return per copy.

On books sold in the "regular trade channels," that is, through booksellers, there has been, during the past thirty or forty years, a material increase in the rate of discount allowed by the publishers to the wholesale dealers or distributing houses, that is to say, a material lessening of the net price received by the publishers. In the earlier period it was customary to charge supplies of books to the wholesale dealers at a discount of 33⅓ per cent.; thus the publisher received for a book published at $1.00, a net price of about 67 cents. These wholesale dealers now receive on current literature a discount rarely less than 40 per cent., and not infrequently amounting to 50 per cent. The ground on which these larger rates have been alleged to be necessary is the increased cost in bringing books to the attention of the retail booksellers throughout the country, and in distributing the supplies purchased. When the bulk of the bookselling was done in the States of the eastern seaboard, it was the custom of the booksellers to come to Philadelphia and New York, not less than twice a year, and to make their own selections from the stocks of the publishers. At the present day these booksellers must be visited by travelling salesmen carrying trunks of samples. The cost of this item of "travelling" and distribution is of necessity much greater for the United States, where the territory to be covered is so considerable, than for a compact market like England, in which a travelling salesman can often visit in one day the dealers of two or three towns. The outlays for advertising, for catalogues and circulars, and for the press copies distributed for review, are also very much larger than was the case thirty years go.

Although the cost of bringing books effectively before the booksellers and the reading public, has so largely increased with the increase in the extent of the market, there has, during the past thirty years, been no deduction in the average rate of the royalty paid to the author, and in fact the tendency has been to increase this rate. The increased cost of the distributing machinery has, therefore, been borne by the publishers. On the book published at $1.00, on which the author formerly received a royalty of 10 cents, this royalty remains the same, but the net price coming to the publisher, in place of being, as formerly, 67 cents, is 60 cents, 55 cents, or even 50 cents.

It will naturally be said that if the expenses of placing a book upon the American market have increased with the increase in the inhabited territory and in the public to be reached, there has probably been also a corresponding increase in the extent of the sales that can be

secured. For a book which on one ground or another makes for itself a distinctive success—a noteworthy narrative of travel like Stanley's "Through Darkest Africa," a religious romance like "Ben Hur," a clever melodramatic story such as "The Leavenworth Case"; for popular poetry such as Carleton's "Farm Ballads"; and above all, for a skilfully edited magazine, the market that is available to-day is both larger and more remunerative than that which could be reached thirty or forty years ago. But for a volume of merely average merit or attractiveness, particularly one in "light literature," the chances of remunerative sale are, I think, rather less good than they were thirty years ago. One difficulty is that the number of writers "of average merit" and the quantity of the books produced by them, have increased in greater proportion than the extent of the reading public. A second obstacle to the sale of books of a certain class is the fact that the demand for light literature is so largely supplied by the magazines, which give to their readers, for a trifling price, more matter and more illustrations than can usually be afforded in a book selling at three times the price. Much of the reading time of the community is also filled up by the perusal of the over-grown Sunday papers.

It is my contention, therefore, that American publishers of books have to-day, with more expensive publishing and distributing machinery, less favorable prospects for securing remunerative sales for "average books" than was the case thirty years ago. The evidence goes to show that the undertakings of the publishers are subject to the same law of "diminishing returns" that controls all manufacturing enterprises and all investments of capital.

It seems probable that for a book, in the publication of which the publisher feels warranted in taking the risk, the royalty arrangement, under which the returns to the author are in direct proportion to the extent of the sales, produces the most equitable results. The larger the sales that can be secured, the smaller the debit to each copy of first manufacturing cost, and the greater the net profit per copy sold.

When a book arrives at the point of being able, so to speak, to sell itself, that is, when there is for it a steady annual demand irrespective almost of the efforts of the publishers, the profits on each 1,000 copies sold are greater than during the earlier sales when there were special expenses of advertising and "travelling" to charge up against it. On such books the authors would, as a rule, be fairly entitled to an increase in the rate of royalty, beginning, say, after 10,000 copies have been sold. Books of this class, however, occur much less frequently

than the publishers could wish or than Mr. Besant, and those holding with him, are apt to imagine. An exception to the principle of increasing the rate of royalty with increasing sales, must necessarily be made when, for the purpose of facilitating these sales, the later editions are published at a materially reduced price. If a book first published at $1.00 is issued in a popular edition (usually in paper covers) at 50 cents, it will not be practicable to pay the author a higher rate than 10 per cent., or five cents a copy. The publisher usually receives for such 50 cent volumes from the wholesale dealer but 25 cents a copy, and after deducting from this the cost of manufacturing, of advertising, and of damaged copies returned (an important item in paper-bound stock) together with the amount of the author's royalty, he will rarely have left a margin of more than two or three cents a copy.

Authors publishing books either entirely or in part at their own expense, are entitled to receive, and should, before committing themselves to any agreement, always insist upon receiving, an estimate showing the extent of the outlay they are agreeing to assume, or in the case of a "half-profit" arrangement, the amount of the expenditure that is to be debited against the "joint account" of the book. If an author, in place of preparing his "copy" in the final form in which it is to be published, indulges in the luxury of "improving" it, or of more or less rewriting it after it has been put into type, the cost of making these alterations belongs to the author's account, and goes to swell his outlay. The difficulties arising under the method of "half-profit" arrangements (a system little in use outside of Great Britain) are in the main due to the failure of the authors to inform themselves in advance concerning the cost of putting a book upon the market, or to place before themselves any trustworthy calculations concerning the prospects of there being any profits to divide. It is undoubtedly true that under this system, inexperienced authors have occasionally been treated unfairly by irresponsible publishers. With every possible allowance for misapprehensions and for conclusions based on inadequate information, the records of the British Society of Authors give sufficient evidence concerning not a few cases of inequitable dealing. But the sweeping conclusions that have occasionally been drawn from some of these cases as to the general untrustworthiness of the body of British publishers, are unquestionably themselves untrustworthy, and if accepted would, assuredly, do very grave injustice. It is a fair conclusion in regard to the "half-profit" system,

first, that it is, as a rule, on various grounds likely to prove undesirable and troublesome, and secondly, that when it is adopted, there should be a specific contract based upon a specific estimate. The larger portion of the difficulties quoted in the reports of the English Authors' Society, have apparently been due to the absence either of contract, or of estimate, or of both. The publisher's estimate, whether for a "half-profit" publication or for one in which the author assumes the whole or some portion of the costs, may very properly include some allowance for the estimated value of the publishing imprint, and of the publishing supervision of the manufacturing items, that will of course differ materially with different firms. It is for the author to decide, after receiving his estimate and before executing his contract, whether or not he desires the service at the price at which it is offered. It is to be noted that very few of the "half-profit" arrangements provide for the sharing of the losses. It appears to be usual in the cases in which losses occur, to leave them to be borne entirely by the publishers. Mr. Besant is inclined to contend that there are, as a matter of fact, no such things as publishing losses. He claims that the publishers rarely take any risk in publishing, as they make a practice of putting their money only into books that are sure to pay. If the accomplished secretary of the Authors' Society really could discover the golden secret of conducting the publishing business without serious risk and serious losses, he could be guaranteed a far larger income as an advisory partner in a publishing firm than he is probably able to earn even from his successful books.

It is of course true that, in the case of a book which produces no profit, and which gives, therefore, under most of the publishing arrangements, no return to the author for his labor, this labor has been thrown away, and constitutes the author's portion of the loss. It must be borne in mind, however, that compensation for literary production can never be made proportionate to the amount of labor, skilled or unskilled, that has been put into it, but depends entirely upon the amount that the community is willing to pay for the result of the work, that is, upon the estimate placed by the community upon the value to itself of the service rendered by the author. It is the contention of the author, in submitting his manuscript to the publisher, that his work possesses commercial value. If the result of the publication shows such value to be a minus quantity, there is no equity in causing the publisher to increase his own loss by making payments to the author. Whatever hours of conscientious labor the author has

put into his book, it is (from a commercial point of view) worth nothing, because the community does not want it, or does not want enough of it, and he must stand the loss of his time and labor caused by his own erroneous judgment. If, on the other hand, the book has been produced at the instance not of the author but of the publisher, it is for the latter to bear the loss due to his bad judgment and his wrong estimate either of the capacity of the author employed or the requirements of the public.

It is the contention of the English Society of Authors, that the publisher who understands his business must take, and as a matter of fact does take, no risk in his undertakings. They arrive at the conclusion, therefore, that in estimating the probable profits from these undertakings, the element of risk need not be taken into account. This conclusion is based upon the assumption that after a little experience, the publisher can become an infallible judge of a "good book" (the term here being used in the trade sense to denote a book that will sell) as, for instance, a trained dealer in provisions is practically an infallible judge of good pork or of good eggs. I can only reply that no such infallible publisher has as yet been produced, and that the history of publishing is a record of erroneous judgments. The authors whose books are successful complain of the injustice of lessening their returns in order to help to make provision for the losses on the unsuccessful books. It seems to me evident, however, that the author's share of the returns from literature must assume its portion of the losses incurred from literature, as otherwise the publishing machinery would assuredly disappear.

The attempts that have from time to time been made by groups or associations of authors to reach the public directly, and thus to save the expense of the distributing agent or publisher, have given some pertinent evidence on this point. In 1758 Lessing took an active part in organizing such a publishing association among certain of the authors of North Germany, who had convinced themselves that the publishers had been absorbing too large a proportion of the gains of literature. The society broke up after an experience of a few years, during which time the authors discovered, first, that they had materially under-estimated the cost of bringing their books before the public, and second, that an inevitable item of their expense was the loss on the books that produced a deficiency instead of a profit, a deficiency which of necessity went to reduce the gains on the profitable publications. The element of publishing fallibility had to be paid for, even

although the publisher had been eliminated, and this fallibility has always, in fact, proved to be a more serious item in the publishing operations of authors, than in the undertakings of publishers acting as agents for the authors. Individual authors have occasionally, as in the case of Ruskin, made a success in the management of their own publications, although it may be borne in mind that Ruskin did not undertake to do his own publishing until, in connection with old established publishing machinery, the reputation of his books had been made and an assured circle of readers had been secured for them.

It has, however, been the general experience of authors, whether acting as individuals or as associations, that they made more money or lost less money, in employing publishing judgment, expensive and fallible as this judgment must often be, than in acting on their own judgment or in attempting to create their own machinery. Publishers may, however, consider it a definite advantage for their own business interests when authors associate themselves together for the purpose of making an intelligent study of the conditions of book-manufacturing and book-distribution. It is the ignorant and inexperienced author who is inclined to be suspicious in the wrong place, to expect impossibilities, and, in his exacting unreasonableness, to add largely to the "botheration" account of the publishing office. It is he who bases his estimate of profits on the calculation that the publisher receives the retail price of the copies sold, and that the entire cost of publishing a book can be arrived at by ascertaining the price at which some "cheap John" printer will produce an edition. If the Authors' Societies will help to clear up some of these elementary misapprehensions, the relations of authors and publishers will certainly be facilitated.

Whatever shape the compensation of the author may take (excepting only that of a purchase outright of his copyright) he is of course entitled to precise information as to the publishing statistics of his books. The yearly or half-yearly accounts rendered should give to him clearly presented statements showing the number of copies that have been printed and the number that have been sold, and the records in the publishing office, serving as vouchers for these statements, should be as open for his inspection (at all reasonable times) as are the files of the press notices. I think it probable that this is the practice of the leading publishers, at least in the United States.

It seems certain that, with the application throughout all the states of the world of the principle and the practice of international

copyright, the returns to the authors, at least to those producing books that are wanted by the community (and by more than one community), must be very much increased. The author should be able, while asking from each reader but a trifling payment, to secure from his constantly increasing circles of readers throughout the civilized world indefinitely increasing returns, and there seems to be no reason, therefore, why the author of the near future (that is, the effective author) may not look forward to the "potentiality of wealth beyond the dreams of avarice."

The returns heretofore secured for literary labor have doubtless been in a large proportion of cases inadequate, as compared with the compensation given by the community for other classes of skilled labor. The extension of the world's market for literature and the control now assured to the author of all the editions of his productions, foreign as well as domestic, will probably, in securing for literary labor an adequate compensation, or at least a compensation proportioned to the number of readers benefited, remove the most fruitful cause of such issues as have arisen concerning the division of profits between authors and publishers. The authors who have always (and very properly) "wanted the earth" will hereafter have for their portion the earth in fee, while the modest requirements of the publishers will be fairly met by the usufruct of the "copyholds."

GEO. HAVEN PUTNAM.

THE GROWTH AND TRIUMPH OF WAGNERISM.

BEHIND the Villa Wahnfried, which King Ludwig II. built for Richard Wagner at Bayreuth, and adjoining the city park, there is a simple grave to which almost every musical pilgrim to Bayreuth pays a visit after he has seen the theatre and festival plays. It is a low, square mound, covered by a large horizontal marble slab, its sloping sides overrun with ivy. Low, shady trees surround it, and visitors who approach it from the park side are prevented by an iron grating from despoiling it of its ivy dress, but not from throwing on the white marble slab wreaths and bouquets, with which it is always covered during the festival weeks. A plain rustic bench stands on one side, and a narrow path leads thence to the garden of the widow Cosima's villa, which was Wagner's home during the last decade of his life.

Beneath that marble slab lie the mortal remains of an immortal genius, who knew that his art would not be fully appreciated until after his death. Much has been written about Wagner's enthusiastic admiration of Schopenhauer, and the causes of it; but one of the main causes has, I think, been overlooked, namely, Wagner's natural sympathy with the idea—which runs like a leading motive through all of Schopenhauer's writings—that the greatest works of genius always require the longest time to secure recognition. Schopenhauer was so confident that his own writings represented the philosophy of the future, that he actually apologized to his "readers of future generations" for wasting so much space in abusing such writers as Hegel, Fichte, and Schilling, whose very names would probably be unfamiliar to them! Similarly, Wagner must have felt that in his polemic writings he was embedding, as Heine would say, the small insects that tormented him all his life, in an amber which alone would preserve them for the eyes of posterity.

Yet even Wagner, with all his Schopenhauerian confidence in the future of his art, would doubtless have been surprised could he have been told that, only eight years after his body had been placed beneath the marble slab behind the Villa Wahnfried, the eighth festival would be held at Bayreuth; that for this eighth festival all the tickets

—for twenty performances—would be sold more than a week before its beginning; that the tickets for "Tristan and Isolde," the most extravagantly Wagnerian and difficult to comprehend of all his works, would be taken first of all, six weeks before the opening of the festival; that more than a hundred letters would be on file begging for any stray Tristan ticket that might possibly be returned; nay, that the demand for tickets for all the three dramas given—"Parsifal," "Tristan," and "Tannhäuser," would be so great that many would be resold in Bayreuth, Dresden, London, and other cities, at from three to five times their regular price ($5.00); and finally, that some of the Wagner societies would address notes of bitter complaint to the festival management for not reserving seats for them and letting the wily foreigners get such a large proportion of the sittings before it was known in Germany that the last were disappearing.

All these things came to pass. So great, indeed, was the financial success of the eighth festival (the artistic aspect will be considered presently), that it has been decided to give these festivals annually hereafter, instead of biennially (on the average) as heretofore. The enemies of Wagner's art, whose number has been greatly reduced since the *Meister's* death, and who change their point of attack in a most amusing manner with every new triumph of Wagnerism, now assert that the whole thing is merely a fad, and that all these princes and princesses, and dukes and counts, and barons and officers, and distinguished civilians, who now crowd into uncomfortable Bayreuth, do so because Wagner is "the fashion," and because Emperor William is the honorary president of the United Wagner Societies.

Of all the funny charges ever brought against Wagner and his art, this is perhaps the funniest. Wagner fashionable! He who spent half his life in demolishing the prima-donna-and-ballet operas which for almost three centuries had been the very type and climax of fashionable entertainment, and the other half in building up a new musico-dramatic art lacking, with the exception of scenic splendors, all the features which had endeared the old-fashioned operas to circles that are averse to every serious effort of thought or attention, and that like to drink in their operatic tunes as they do their champagne!

That there are some extraneous elements in the Bayreuth success cannot be denied. Probably a considerable proportion of the American, French, and English tourists, who seemed to make up more than one-half of the audiences this summer, were drawn to Bayreuth less by a love of dramatic music than by general curiosity and a desire to

see the gorgeous and novel scenic displays for which these performances are famous. The American tourist, in particular, is apt to ask before leaving for Europe: "What is going on over there this summer?" "The Bayreuth festival," some musical friend will suggest; so off goes the tourist to remote and expensive Bayreuth, when the same performance by the same artists in New York or Chicago might not have tempted him to spend four hours of his time and three dollars of his money. But that these accidental visitors at Bayreuth are of no significance is proved by the indignant letters from excluded Wagner societies, above referred to, which show that the audiences would have been just as large without this class of foreign tourists, though the prices for resold tickets might not have risen quite so high.

No, the present popularity of Wagner's music-dramas is not a fad or a fashion. Fads and fashions do not grow slowly; they come suddenly and go as suddenly, whereas Wagnerism has had for the last fifty years (Rienzi was produced in 1842) such a slow but at the same time such a steady progress that it may be graphically expressed by a *crescendo* sign, with the ends still widening, more rapidly than ever; while Italian opera is going the other way. In Berlin, for instance, the annual number of Wagner performances has been doubled within the last ten years. In the operatic year 1882–83 the number of performances given was 237, of which 32, or one in seven, were devoted to Wagner. During the operatic year 1890–91 there were 278 representations, of which Wagner received 67, or a proportion of one in four. Think of it for a moment; the Imperial Opera in Berlin gives 67 evenings to Wagner and only 211 to all other composers—German, French, and Italian combined—was there ever such a progress, such a triumph, before? Yet the director of the Berlin Opera, Herr von Hülsen, waited nine years in the case of "Lohengrin," and, subsequently, almost as long in the case of the "*Ring der Nibelungen*," before he made up his mind to accept these works, because he was afraid they would not pay! The German capital, which should have been leader in the musical world, consequently had to submit to the disgrace of having to import an opera company from Leipsic to hear, in a private theatre, the first performances of the greatest work of art, and the most national in subject and spirit, ever produced in the fatherland. To-day Wagner has more than twice as many evenings as the composer next on the list—Verdi, with 35; Weber, Mozart, and Meyerbeer coming next with 25, 18, and 17 performances respectively.

In other German cities the Wagnerian preponderance is almost as

striking as in Berlin. Thus, Munich had 54 Wagner performances during the season 1889–90 (last season's figures unfortunately are not yet at hand; they would be still more eloquent); Dresden had 51, Vienna 48, Hamburg 40, and Leipsic 39. In all, 883 performances of Wagner's operas were given that season in 79 German and Austrian cities. Outside of Germany, too, Wagner is everywhere in the ascendant, even in Italy, where he received 70 performances last season; while the new season at Milan, the operatic centre of Italy, is to be opened with "Tannhäuser" and "*Die Walküre*." In New York, the decision of the directors of the Metropolitan Opera House to return, for a year at least, to Italian opera, was based on a mere desire for a change, and not on financial grounds; for, during the whole career of German opera, Wagner received as many nights as all other composers combined, and during the last five years the receipts for Wagner's operas exceeded by about $150,000 those for all other operas combined. England, too, has been making strenuous efforts within the last few years to get away from that exclusive Handel-Mendelssohn devotion which, like an impenetrable London fog, has so long obscured the vision of the music of the present and the future. The general critical tone toward Wagner, which used to be ludicrously arrogant and silly, has become more respectful, and, in the case of the leading critics, even frankly enthusiastic. I have not at hand at this writing the complete statistics of this year's season of Royal Italian opera in London, but I know that there were only two Italian singers in the company, that at the end of two months "Lohengrin" led in the repertory, and that of the forty-six performances given, twenty-five were of operas by German composers, sixteen by French, and only five by Italians. London critics, too, have told us over and over again that the best two names with which to conjure a concert audience in that city are Beethoven and Wagner; and the largest audiences are always to be found at the Hans Richter concerts, where the works of these two Germans chiefly are interpreted by the conductor of the first Bayreuth festival. At present the most anomalous musical circumstance in London is the fact that the manager of the so-called Royal "Italian" Opera, though neither his repertory nor his singers are Italian, persists in retaining Italian conductors—three of them! Now, no one can deny that Italy has produced great singers (though not nearly so many, compared with other nations, as the public fancies); but as writers for the orchestra, and as conductors, the Italians rank far below the Germans and the French, and it is as ab-

surd as it is unjust to Wagner to entrust interpretation of his works in London to incompetent Italians. Sir Augustus Harris seems to fear that if he should give Wagner properly, with German singers and a German conductor, the London operatic repertory would become as predominantly Wagnerian as it has been in New York during the last seven years. That danger does indeed exist, but neither Sir Augustus nor any one else can ward it off much longer.

In France the progress of Wagnerism meets with peculiar obstacles. Not so much in the silly and brutal chauvinistic disturbances which have during the last thirty years prevented Paris from hearing operas that have conquered the whole musical world; for the last anti-Lohengrin riot in Paris was of such a disgraceful and idiotic character that even those newspapers which had been always hostile to Wagner, pronounced them a national disgrace, and declared that they made the French what they least like to be—ridiculous in the face of other nations. It is, therefore, extremely probable that the performances of "Lohengrin" now in preparation at the Grand Opera will not be interfered with by the mob. The obstacles I refer to are rather of a sociological character. The Frenchman is the least cosmopolitan and the most provincial being in the world. Everything interests him only in so far as it is related to Paris; whatever has no relations to Parisian life and modes of thought does not exist for him, or must at least be first made palatable by being cooked in the French style. Even such masterworks as Weber's "*Freischütz*" and Beethoven's "Fidelio" had to be "adapted" to French taste (that is, mutilated with omissions, additions, and alterations), before they were considered fit to be placed before Parisian audiences. The Germans and English eagerly import all good things they find in France, but who ever hears of Goethe and Schiller being performed for the Parisians? Even the universal Shakespeare is beyond them, and "Hamlet" is found palatable only in the form of a French ragout.

Under these circumstances what hope is there in Paris for Wagner's dramas, with their German subjects, German sentiments, and German music? Very little, one would think, and yet there are some considerations which point to a different conclusion. It is a noteworthy fact that the two best books on Wagner written so far are the works of Frenchmen—Adolphe Jullien, and Edouard Schuré. At Bayreuth the French visitors are always among the most enthusiastic; and in Parisian concert halls Wagner's music holds a more conspicuous place than that of any French composer. How shall we explain

this paradox? In this way, I think: Wagner is the most genuinely dramatic of all composers, and the French are of all nations the most dramatic in their instincts and tastes; hence it is possible that this dramatic affinity may overcome the difficulties presented by the Teutonicism of Wagner's operatic subjects. At any rate the experiment that is being made this month (September) in Paris with "Lohengrin" is of great sociological as well as artistic interest, for it will give the French one more opportunity to show whether they will ever outgrow their narrow provincialism in art and literature, and cultivate that cosmopolitanism, that ability to appreciate foreign products—and even to relish national peculiarities and local color—which is the highest test of plastic and progressive intellectuality, and which, by the way, is fast making America the world's leading nation.

What gives additional interest to the "Lohengrin" experiment is the fact that for the first time will a German opera of its importance be given in Paris exactly as intended by its composer, without any French sauce. The title rôle will be by M. Van Dyck, who has been the Parsifal—and a capital Parsifal he was—at the last two Bayreuth festivals; while the orchestra will be under the direction of one of the greatest Wagnerian conductors, M. Lamoureux, who attends all the Bayreuth festivals, and who has done as much for the Parisians in making Wagner's music known in their concert halls as Theodore Thomas has for New Yorkers. No cuts will be made in the Paris "Lohengrin," and the management has gone so far in its desire to do justice, at last, to Wagner, that his widow has been consulted regarding details of which she was supposed to possess the secret.

And this brings me to the principal point of my article. After fifteen years' hard and incessant labor in behalf of Wagner's cause (at first seemingly hopeless) I take great pleasure in recording, as I have just done with the aid of irrefutable statistics, the financial success of Wagner's operas at Bayreuth, Berlin, New York, and other German and foreign cities. But the success of Wagner's operas is not necessarily the success of Wagnerism; for these operas can be—and in the past habitually have been—given with great financial success, yet in such a way that Wagner himself was utterly disgusted with the performances, because they were not according to his intentions, the episodic lyric portions and melodies alone being well done, while his important musico-dramatic innovations were almost as much ignored as in the old-fashioned operas which made no pretensions to being real dramas, but were little more than concerts in costume.

Wagner was very fond of travel, good living, and luxury in general, and he knew from the success of his "Rienzi" that, if he continued writing operas of that old-fashioned type, immediate wealth and fame would be his. But his artistic conscience did not allow him to swerve for a moment from his dramatic ideal, which he began to form with his next opera and improved with each following one; and even when, as a political exile, he dwelt in Switzerland, writing his "Nibelungs' Ring" for the benefit of posterity, in debt, and practically living on the bounty of friends, he would not allow his operas to be performed (much as he needed money) unless assurance was given that his directions would be followed. This is clearly brought out in this passage from a letter to his Dresden friend, Ferdinand Heine:

"The small attention which G. paid to all my hints and directions appears to have made your hair stand on end! And yet Papa Fisher blames me so much for my 'Guide to Tannhäuser'—he always imagines it to be my sole concern to see my operas performed, and that it is *therefore* 'unwise' to make so many out-of-the-way demands!! I have indeed good ground for shame; to have been misunderstood on the most important points even, by you and him. I care *absolutely nothing* about my things *being given:* I am only anxious that they should be *so given* as I intended; he who will not and cannot do that, let him leave them alone. That is my whole meaning—and has Fisher not *yet* found that out?"

Such was Wagner's artistic character; such his plans and intentions, to which he clung with a pertinacity unparalleled in the history of art. In one of his letters to Uhlig occurs this passage:

"I want a small house with a meadow and a little garden, to work with zest and joy—but not for the present generation. Besides 'Siegfried' still some big plans in my head; three dramas, with a three-act *Vorspiel.* If all German theatres tumble down, I will erect a new one on the banks of the Rhine, gather everyone together, and produce the whole in the course of a week."

When do you suppose this prophetic letter was written? It is dated September 30, 1851. From that time until the summer of 1876—exactly a quarter of a century—Wagner clung to his plan, heroically struggling against almost incredible difficulties. But, in this case at least, Schiller was shown to be wrong when he wrote that "against stupidity the gods themselves fight in vain." Wagner was only a mortal, and he fought against the stupidity of a nation which almost unanimously tried to prevent him from bringing forward the greatest work of art ever created on German soil. The press hunted him down like a wild beast. Why should any mercy be shown to a composer who had spent twenty-five years of his life in creating a national work of art and who added to this injury the insult of building, with

the aid of a king and a few friends, a theatre for the special performance of this work of art? "Down with him," was the watchword; and the editors of the great newspapers took the muzzles off their critics and set them on the poor man. He was called a charlatan, a humbug, he was called so many offensive things that a Berlin author, Wilhelm Tappert, compiled a special "Wagner Lexicon," containing a collection of coarse and insulting epithets hurled against Wagner. It consists of forty-eight pages, but is very incomplete, as I have in my own note and scrap-books enough material for another pamphlet of the same size. A leading Viennese critic, L. Speidel, actually wrote:

"No, no, and three times no; the German nation has nothing to do with this musico-dramatic simian disgrace [*Affenschande*], and if it should ever find real pleasure in this false gold of the 'Nibelungs' Ring,' this fact alone would cancel it from the list of occidental artistic nations."

Against such colossal stupidity Wagner fought—and conquered. Of course, when almost the whole press had advised the Germans not to go to Bayreuth, the first festival was inevitably a financial failure. But King Ludwig made up some of the losses, and Wagner himself was obliged to foot the other bills—a just punishment for his impertinence in trying to force on the Germans a thing they did not want. But the old "charlatan" was not to be suppressed even by this sad experience. "There is no fool like an old fool," the proverb says, and Richard Wagner, though almost seventy years old, went to work and composed still another music-drama, which he called "Parsifal," and which he announced for performance at Bayreuth in 1882. This was really too much for the newspapers. Fearing that, in spite of their constant vituperation, enough persons might go to Bayreuth to make "Parsifal" a success, some of them got up a rumor—a pure fabrication—that smallpox was prevailing at Bayreuth. This had its proper effect. The receipts for "Parsifal" amounted to only $60,000, and Wagner, worn out by the fatigue of producing this work at his advanced age, and by financial troubles, went (at King Ludwig's expense) to Venice, where he died a few months later.

After having succeeded at last in killing him, his enemies were satisfied, and soon became amiable and even condescendingly friendly. There is nothing in the world that a German likes so much as a dead man of genius. Foreign men of genius he admires dead or alive, but a German genius—"let us have him dead or not at all." All that was needed to make Bayreuth successful was Wagner's death. True, he was no longer there to give those finishing touches

which were what made the Bayreuth performances so superior to all others; but that was a trifling detail. The main point was that he was dead and out of the way, and so the *parole* was given out that henceforth there should be no serious opposition to his works. Bayreuth prospered. "Parsifal" was repeated in 1883 and 1884 with such encouraging results that it was found practicable to adopt Wagner's plan of producing all his works there, one or two at a time, and so, in 1886, "Tristan and Isolde" was added to "Parsifal," followed at the next festival by "*Die Meistersinger*" and finally, this summer, by "Tannhäuser," which, in Wagner's original plan (frustrated by the hostility of the press and the lack of funds) had been put down for 1880. This original plan included the "Flying Dutchman," "Tannhäuser," and "Lohengrin" for 1880; "Tristan" and "*Die Meistersinger*" for 1881; a repetition of the "Nibelungs' Ring" in 1882; and "Parsifal" in 1883.

Of the extraordinary success of this summer's festival I have already spoken. What it amounted to, in dollars, is easily calculated. As every seat for the twenty performances was sold in advance, and as the house holds 1,650 seats at five dollars each, the total receipts for the month's festival must have been just $165,000. But, as a large proportion of these tickets were resold at from three to five times their original value, it is safe to put down the sum paid for Bayreuth tickets this summer at $200,000, or $10,000 a performance, which equals the highest receipts of the Patti "farewell" performances; and Patti is the only one of the old-fashioned prima donnas who could draw half that sum to-day. Herein lies the significance of the Bayreuth success; not in the $200,000 paid for twenty performances in one month, but in the fact that what drew the 20,000 visitors who spent that sum to Bayreuth was not the desire to hear a famous singer or two, but the wish to enjoy Wagner's music-dramas performed in every detail as Wagner intended them to be performed. This is what I call the triumph of Wagnerism.

The full import and importance of this triumph can perhaps be most clearly brought out by recalling a few facts in the history of "Tannhäuser" which was the novelty at this year's festival, and concerning which so much curiosity was felt, partly because of the promised scenic marvels, and partly because of its being the first of Wagner's early operas ever produced at the Bayreuth theatre. It was in 1845 that "Tannhäuser" had its first performance in Dresden, and under Wagner's own direction. But its style was so novel, and

its difficulties to the players, and especially to the singers (who were all at once called upon to be actors as well as singers) so great, that Wagner himself was obliged to make cuts which impaired the unity of the work; and the general result was such that in later years the memory of these first performances was a torture to him. Yet he knew that they were infinitely better than those given in subsequent years at other German opera houses; and this knowledge kept him on pins and needles during all the years of his political exile in Switzerland. At first he tried to mend matters by writing letters with explanatory hints to the managers who were about to produce his operas. He was especially solicitous about "Tannhäuser," and finally wrote, for the use of all concerned, a thirty-five page "Guide to the Performance of Tannhäuser," which is one of the most instructive dramaturgic essays ever written. In it he shows, so clearly that the blind can read, why his operas, if performed *à la* Bellini and Donizetti, by mere singing puppets, must lose all their best points. He declares that even the shallowest Italian opera would gain in effect if the singers would try to bring out such connection as exists between the play and the music, but insists that his own operas absolutely require the vocalists to be good actors at the same time. He carefully analyzed the principal rôles for the benefit of the singers; showed why the cuts he made in Dresden were based on local causes and should not necessarily be made elsewhere; explained to the stage manager the illustrative character of the music and the necessity of his following carefully not only the scenic directions printed in the libretto but the more minute ones written in the orchestral score, and also gave numerous valuable hints to the conductors.

Copies of this guide were sent to the theatres, but how much they were heeded became evident from the fact that, some years later, when Wagner, having exhausted his supply, wrote to the Munich opera for the loan of a copy, the six copies which he had sent there were all found *uncut* in the library of the institution!

Thus things went on until 1861, when it seemed as if Wagner was at last to have an opportunity to produce "Tannhäuser" properly. Napoleon wanted to hear the opera, summoned Wagner to Paris, and placed unlimited sums at his disposal, to do just what he pleased. So far all well; but there was trouble about getting competent singers; the laws of the institution prevented Wagner from conducting his own opera, and conductor Dietsch, who detested Wagner, stubbornly refused to listen to his suggestions, so that the *tempi* were

all wrong. The result was such that Wagner, by his own confession, was rather glad when the Jockey Club, enraged by his refusal to introduce a ballet in the second act, created such a disturbance that it was felt advisable to withdraw the opera after the third performance, although the house had been sold out for many nights in advance.

The one good result of the Paris experiment was that Wagner, although he refused to mar his opera by introducing an uncalled-for ballet in the second act, took this opportunity of carrying out his former plan of enlarging the scene in the Venusberg with the striking pantomimic scenes from Greek mythology and the intoxicating music of the *bacchanale* which, with the partly re-written duo between Venus and Tannhäuser, constitute the main features of the so-called "Paris Version" of the opera. Some years later Wagner made attempts at Vienna and elsewhere to introduce this new version; but as soon as his back was turned on the city they went back to the old version. To cut the story short, Wagner had to die before his ideals were recognized to be correct. A year or two ago one royal opera house brought out the Paris version, and it proved such an immense success that everybody was aroused. Other cities followed suit, and everywhere—in Munich, Dresden, Berlin, and Leipsic—the people crowded to see "Tannhäuser" night after night, as if the opera were a complete novelty. The managers were surprised. Then Wagner, after all, was not a fool or a crank when he insisted that his operas should be given *à la* Wagner, and not *à la* Bellini! It actually *paid* to give them *à la* Wagner! The lesson has not been lost on other cities, many of which, headed by Hamburg, will bring out the real "Tannhäuser" at once; and now that the principle has been established that it pays to give Wagner's operas correctly, not only at Bayreuth but everywhere, the cause, of course, is won. And this is what I mean by the triumph of Wagnerism.

HENRY T. FINCK.

THE GOVERNMENT OF THE UNITED STATES IN ACCOUNT WITH THE TAX-PAYERS.

To any person who is conversant with accounts, the book-keeping in the Treasury Department of this government is a marvel of good method, of well-adjusted responsibility, and of accuracy. Whatever may be the faults in the mode of appointment to the civil service, the civil service of the Treasury Department itself, when judged by the accounts rendered, is worthy of all praise. The accounts as now rendered by the Pension Office cannot be included in this commendation.

The reports of the Treasury Department, especially the statistical abstract, of which the thirteenth number has been lately issued by the Bureau of Statistics of the Treasury for the year ending June 30, 1890, render an analysis of the cost of our government a very easy matter. Very few changes require to be made, as compared to the annual statement submitted by the Secretary of the Treasury, in order to bring out the most interesting and salient points in this annual settlement. In the subsequent pages the accounts of the fiscal year ending June 30, 1889, will be analyzed, and some comparisons will be made with the two decades that have elapsed since the year 1870. In this period of twenty years gross receipts of thirteen and a half billion dollars have passed into the treasury, with corresponding disbursements, all of which have been accurately accounted for, and the accounts have been balanced without any instance of conspicuous fraud or of material loss to the tax-payers. Yet the accounts of this last period of twenty years deal proportionately with much smaller sums than those that passed through the treasury between 1860 and 1870 with identical results in the accuracy of the accounting.

There is but one slight improvement in the form of this general accounting which may render the annual statement so simple and so plain that he who runs may read. The facts are all to be found in this statistical abstract, and it has required but a few hours' work to put them into shape for ready comprehension. To this new form I have given the title which is also the title of this paper.

Dr. *The United States in account with the Tax-Payers.*

To internal tax collected on whiskey	$74,312,206.33		
To duties collected on spirits, wines, and beer	7,786,399.87	$82,098,606.20	
To internal tax collected upon tobacco	31,866,860.42		
To duties collected on cigars, snuff, and tobacco	11,194,486.68	43,061,347.10	
To internal tax on fermented liquors		23,723,835.26	
All taxes on liquors and tobacco			**$148,883,788.56**
To duties collected on Class E, consisting of articles of luxury or of voluntary use	45,890,357.00		
Less spirits, tobacco, wines, and beer above	18,980,886.55	26,909,470.45	
To duties collected on Class D, consisting of manufactured goods ready for consumption		68,683,765.00	
To duties collected on Class C, consisting of partly manufactured goods which are used in the processes of domestic industry		22,195,095.00	
To duties collected on Class B, consisting of crude materials which are necessary in the processes of domestic industry		15,363,625.00	
To duties collected on Class A, consisting of articles of food and live animals:			
Sugar and Molasses,	55,976,328.00		
All other	10,592,704.00	66,568,932.00	
To sundry duties credited by the treasurer over and above duties on goods entered specifically for consumption		5,130,967.14	**204,851,854.59**
To miscellaneous revenue from sales of public lands, District of Columbia, consular fees, etc.			**22,170,538.44**
To sundry internal taxes, oleomargarine, etc.			**978,611.91**
To nominal profit on purchase of silver bullion, coined and issued as dollars of full legal tender			**10,165,264.79**
			$387,050,058.29

Fiscal Year ending June 30th, 1889. *Cr.*

By the cost of conducting the government:			
Congressional expenditures	$7,015,584.98		
Executive Department....	12,242,427.67		
Judiciary.....	4,463,322.51		
Territories, Land Office, etc.	1,844,795.89	$25,566,131.05	
Foreign intercourse.....		1,897,625.72	
Custom Houses, Court Houses, etc.....	5,028,170.66		
Light House Department	2,702,442.72		
Mint	1,027,484.80		
Life Saving Service.....	928,421.19		
Judgments, Court of Claims	3,343,794.66		
Sinking fund Pacific R. R.	1,326,175.10		
Mail transportation Pacific R. R.....	1,267,944.65		
District of Columbia.....	5,248,669.92		
Department of Agriculture	1,043,412.75		
Postal deficiency.....	3,868,919.73		
Sundries.....	9,755,856.12	35,541,292.30	
Total Civil Service		63,005,049.07	
Collecting revenue from customs.....	6,518,982.79		
Collecting internal revenue	3,770,388.72		
Refunding excess of customs deposits.....	4,356,759.74		
Debentures and drawbacks paid under customs laws	3,012,883.94	17,659,015.19	
Total cost of civil government, collecting revenue, and abatements.....			**$80,664,064.26**
By support of army.....	33,226,974.15		
Fortifications, rivers, and harbors.....	11,208,296.70	44,435,270.85	
Total cost of Military Department.....			**44,435,270.85**
By support of navy.....	15,747,855.38		
Increase of navy	5,630,953.93	21,378,809.31	
Total cost of Naval Department.....			**21,378,809.31**
All Civil, Military, and Naval Departments.....			**146,478,144.42**
By expenditures for account of Indians.....		6,892,207.78	
By interest on public debt.....		41,001,484.29	
By arrears of pensions settled.		21,442,349.13	
By current annual pensions...		66,182,429.98	**135,518,471.18**
Total disbursements..			**281,996,615.60**
Balance surplus.....			**105,053,442.69**
			$387,050,058.29

It may be hoped that the Secretary of the Treasury will instruct the Chief of the Bureau of Statistics to present to Congress at its next meeting, forms of statements or accounts-current corresponding to the foregoing for each year from 1871 to 1880 inclusive, and also from 1881 to 1890.

The fiscal year ending June 30, 1889, has been chosen as an example of this method of analysis because it was a normal year and because the revenue had not been affected either by the subsequent tariff legislation or by the expectation of changes in our system of taxation. The two subsequent years ending respectively June 30, 1890, and June 30, 1891, would show even more startling results, but both had been to some extent affected by prospective legislation.

The point which may excite the greatest surprise in this account is the fact that what may be called the normal cost of the government of the United States, including under this title the cost of the civil service, of the military establishment (including fortifications and river and harbor improvements), and of the naval establishment (including the construction of vessels), amounted in the fiscal year ending June 30, 1889, to

$146,478,144 (one hundred and forty-six and a half million dollars).

This expenditure was more than met by the taxes, including the duties which were paid on liquors and tobacco. The amount of revenue derived from these two sources in the same year was

$148,883,788 (one hundred and forty-nine million dollars).

A comparison of the normal cost of government for twenty years, conducted by various administrations under different political titles, may also cause some surprise.

From 1871 to 1880 this normal cost averaged $124,524,433. (In round figures one hundred and twenty-five million dollars.)

The revenue derived from liquors and tobacco in the same period averaged, $112,225,584. (One hundred and twelve millions.)

The normal cost of the government from 1881 to 1890 averaged $132,740,067. (One hundred and thirty-three millions.)

The revenue derived from liquors and tobacco in the same period averaged $141,248,166. (One hundred and forty-one millions.)

The figures of 1889 have been given.

In the fiscal year ending June 30, 1890, the revenue derived from liquors and tobacco was $163,490,210. (One hundred and sixty-three millions.)

In 1890 and 1891, for which the figures are not yet available, the revenue from these sources has been yet more.

These figures make it apparent that the revenue derived from liquor and tobacco increases in ratio to population and even more,

while the normal expenses of the government diminish in ratio to population. The time is therefore within plain sight when liquor and tobacco may be dealt with as the permanent sources from which may be derived all the revenue that will be required to cover the normal cost of the government, and perhaps the interest on the public debt as well; the cost and interest diminishing in ratio to population while the revenue from these sources increases.

At this point it may also be remarked that the cost of collecting the taxes on whiskey, tobacco, and beer is relatively less than the cost of collecting the revenue from customs; even without charging to the latter the expense of building custom houses or the cost of sustaining the revenue marine. In 1889 the per cent. of the cost of collection to revenue was as follows:

Internal taxation,....	$2\frac{88}{100}$ per cent.
Customs revenue,.....	$3\frac{14}{100}$ per cent.

The variable elements in our expenditure are substantially as follows:

On Fortifications, on River and Harbor Improvements,
On Naval Construction,
Interest on the Public Debt,
Pensions.

The first two named are relatively unimportant, the difference between extreme economy and extravagance being within the limit of ten millions a year.

The proposed bounty on the production of sugar might have been named if it were likely to stand; it has been set aside as an example of temporary aberration from common sense in finance, probably of no long duration.

The variables dealt with as to the past show the following comparisons:

In 1871 the interest on the public debt was.....	$125,576,565
The pensions came to.....	34,443,894
In 1891 the interest on the public debt amounted to.....	36,099,284
The pensions.....	106,493,890
If the two are combined they exhibit for 1870 an expenditure of.....	150,020,459
For 1890,.....	142,593,174
Reduction in aggregate,.....	$7,427,285

The information which is given to the public in the statistical abstract furnished by the Commissioner of Pensions is very incom-

plete and insufficient. In that respect it differs very much from the other money accounts, which are fully and adequately stated.

In 1889 the pension account is stated as follows:

First payments,	$21,442,349.13
Pensions exclusive of first payments,	66,832,764.15
Expenses,	856.855.16
Total,	$89,131,968.44

In 1890 the account is stated as follows:

First payments,	$38,721,866.03
Pensions exclusive of first payments,	66,806,314.35
Expenses,	965,709.81
Total,	$106,493,890.19

It may be assumed that what are named "first payments" constitute the arrears of pensions which, when once paid, are finally settled. The sum under the head of "pensions exclusive of first payments" is assumed to be the annual list continuing payable until death. But in the table given in the statistical abstract great variations appear year by year. The amounts go up and down, increasing and diminishing without apparent order or rule, and without explanation. It may be hoped that the next Congress may institute an inquiry, in order that adequate information of a systematic kind in regard to pensions may be spread before the public. The form should be somewhat as follows, taking an arbitrary date, say 1881:

Pensions which had been granted up to 1881 inclusive,	$
Number of pensioners then upon the roll,	
Arrears which had been paid up to that date,	
Annual amount due pensioners on the roll at that date,	

Subsequently a table should be given as follows:

Number of pensions granted subsequent to 1881, to June 30, 1891, inclusive,	$
Arrears paid in that period,	
Number of pensioners deceased in that period,	
Amount of pensions which had fallen in by decease in that period,	
Number of pensioners remaining on the roll June 30, 1891,	
Amount due to pensioners on the roll at that date,	

Nearly one generation has passed since the beginning of the civil war. Vast sums have been paid in pensions and will continue to be paid. If the pension accounts were as fully and accurately stated as the other expenses of the government now are, it would not be diffi-

cult to determine the true measure of the obligation nor would it be difficult for an actuary to compute its probable duration. It may be hoped that the next Congress will demand an accounting such as will enable the tax-payers to compute the cost of a burden which will cease to be deemed one when its true measure is known, and the payment of which will not be grudged down to the last dollar which is justly due. There are suspicions resting against the whole pension service which ought to be removed.

Suffice it for our present analysis that up to this time the obligation to pay interest upon the debt has been diminished by liquidation of the principal, faster than the obligation to pay pensions has increased, even including the arrears.

The effect of these changes has been that, while the absolute disbursements of the government have increased, the relative burden of taxation upon the people has diminished.

The average cost of the support of the government, including interest and pensions, per capita, was:

In 1871,	$7.39
In 1889,	4.75

The average tax paid by duties on imports was:

In 1871,	$5.12
In 1889,	3.62

The average tax paid under the internal revenue measures was.

In 1871,	$3.64
In 1889,	2.34

The interest charge per capita was:

In 1871,	$2.83
In 1889,	.53

The pensions charge per capita was:

In 1871,	$0.87
In 1889,	1.74

The obligation to the pensioners is admitted to be very great, and the actual burden is large in amount. It will be cheerfully borne if the pensions are justly granted and the service is rightly administered. This tax is sometimes compared to the cost of the standing armies of Europe, but there is little analogy. The worst effect of the blood tax of a great army is the withdrawal of the most stalwart men from productive industry for a long period in the prime of life, their time being devoted to preparing themselves for the future destruction of the

hard-earned wealth of nations. The mere maintenance of these armies is more destructive than even war itself, because it is continuous. The pensions paid by us are derived from the increasing product of a nation which was saved from destruction by those who served it so well. They now share in the work of making this constantly increasing product which the very war itself developed.

The questions on which parties are now dividing are those which are connected with the financial policy of the country. It may be that this simple analysis of our national accounts will be as serviceable to one side as to the other. It may remove from the debate many ungrounded aspersions upon either party.

The fundamental principle of national taxation may perhaps be stated in a single sentence:

All taxes that the people pay, the government should receive.

The simple forms of stating the present sources of revenue and the respective amounts which are derived from each source may perhaps make it easier to choose the articles that may rightly be taxed and to separate them from the articles that ought to be exempt from taxation.

It may be judicious not to prophesy, but one may forecast what may be the conditions under which a new administration will meet a new Congress in December, 1893. The last Congress has made heavy appropriations in excess of the record of previous years; putting aside the bounty on sugar for the reasons given, the heavier appropriations are mainly for the construction of naval vessels, for heavy guns, and for other works which will take more than one year for their completion. Therefore these heavier appropriations, aside from pensions, may not increase the annual cost of government in excess of the additional income which is being derived from liquors and tobacco. Moreover, any one who has followed the course of high tariffs with care may have noticed that when high duties are put both on materials in the crude or partly manufactured condition and also upon finished fabrics, imports are very apt to increase and not to be diminished by that policy. In view of the very heavy crops about to be gathered and the large imports which may come in exchange for them, the revenue from dutiable imports may also increase in considerable measure.

The doubtful point may be whether or not the discredit growing out of the threat of the free coinage of silver will have had a wide extension, stopping for the time in some measure the progress of

the country, and thereby diminishing its power of consumption. If it should presently become apparent that gold may be demonetized, the remedy will doubtless have been taken under existing acts by lessening the coinage of silver, and in view of the danger avoided, which will then have become apparent to the whole country, there will be no fear of any further pressure to carry this objectionable measure of free coinage. It is about dead.

Under these conditions the new administration may meet the new Congress on December, 1893, with a report rendered by the Secretary of the Treasury somewhat as follows: *The income derived by the treasury from taxes and duties upon liquors and tobacco is now sufficient to cover all the normal expenses of the government, including the army and the navy, and in addition thereto the interest upon the public debt.*

It will therefore be incumbent upon Congress only to make suitable provision for the amount of revenue which may be necessary to pay pensions, and to contribute to the sinking fund for the ultimate redemption of the public debt, according to law.

To that end, these plain and simple propositions and this account-current of the government of the United States in account with the tax-payers may lead the way.

EDWARD ATKINSON.

BOSTON, MASS., July, 1891.

THE POLITICAL ISSUES OF 1892.

PROPHESYING has always been an uncertain trade, and political prophesying is notoriously the most perilous branch of the art. To attempt to predict accurately the political issues of a year hence is almost as dangerous as to undertake to foretell the weather for the same period. In trying, therefore, to define future political issues, all that is possible is to state what issues seem probable under existing conditions, with the broad and very unsafe assumption that those conditions will not change materially and that no great disturbing element will come to alter the situation. From the present outlook it would seem that the dominant issue in the election of 1892 will be the money question, or, in other words, the question of the free coinage of silver.

To this the able Democratic editor, whether he be regular and moderate, or independent and extreme in his partisanship, will reply in the stereotyped fashion that this is a Republican idea, and that the wish is father to the thought because the Republicans desire to avoid the tariff and to bring on the financial issue. It does not, in reality, make much difference what party editors and orators, or even party organizations, think or want; for issues are not made in that way. Public questions arise and create parties, or else existing parties accept those issues which the times bring, because they cannot be avoided. But even if the Republicans could shape issues to suit themselves, it is a mistake to suppose that they have the least desire to avoid the tariff, for from the point of mere selfish political interest it is an easier and safer issue for them than that of silver coinage.

Let me say a few words in explanation of this. The tariff issue is politically dangerous to the party which has last put its theories into the form of law. Any new tariff, no matter whether it is constructed on free-trade or protection principles, is sure to disturb and irritate a large number of interests and a still larger number of persons. The only tariff that is universally popular is that which has not yet been put into the form of law, but which still soars in the regions of vague generalities. The unwritten tariff suits every district

and every interest in the country, and its political proprietor is likely to benefit accordingly. It is only when the bright creature of the imagination is rudely brought to earth and crystallized in legislation or in a bill, that it arouses opposition. In 1888, the Democratic party formulated and passed through the house the Mills tariff, and the Republicans made their campaign against that specific measure. The Democrats were compelled to defend a series of schedules which could not be disguised, while their opponents fought for the general policy of protection without being obliged to enter into details. Upon this issue the Republicans carried the country. It was then their turn to act. They kept their pledges by putting their principles into law and, no matter how wisely they framed their bill, they were certain, by the mere fact of positive action, to arouse opposition. They were obliged, moreover, to go to the country when the bill had just become a law, and before any of its results, by which alone the attacks upon it could be met, could possibly be fairly known. The opportunity for the false prophet was therefore unusually brilliant, and he took full advantage of it. In the skilfully wrought panic which ensued about high prices, the Republican party suffered severely. Since then a year has elapsed. The benefits of the tariff of 1890 are becoming daily more apparent, and it is also obvious that such mistakes as may exist in the McKinley Bill can be easily remedied if the work is entrusted to friends of the protective principle. Most important of all, the burden of positive action has been shifted. The Democrats have the next house. They are bound to formulate their unwritten tariff of the platform and the newspaper, and to put it into law.

Hence it follows that the contest in 1892, so far as the tariff is concerned, will again be as to whether a new and specific free-trade tariff shall be accepted or whether the protective policy shall be continued, with such changes in detail as may seem desirable. All the people and all the business interests that dislike change as such (and they are very numerous) opposed the Mills Bill and the tariff of 1890 alike. They will not like the next new tariff any better, for they desire above all things to be let alone. In 1892 the Democrats will be insisting on a change and will present their propositions in such a form that the country cannot mistake them. They will have passed from the easy work of criticism to the heavy task of actual production. The bright angel tariff which figured in their glowing speeches in 1890 will have given place to the sad reality of a House bill. Their proposed change will mean, in the first place, like all changes, a dis-

turbance of existing conditions, and, in the second place, the complete overthrow of the protective policy. The Republican party believes in the protective policy, and is always ready to go to the country upon it. On that general issue it has won, whatever the defects in particular provisions of the law may have been, and on that general issue it has no question but that it can win again, because it feels satisfied that, however men may differ as to details, a majority of American voters are in favor of a protective policy as opposed to a free-trade policy and do not believe that the time has yet come to uproot the former and to substitute the latter.

For these reasons, therefore, the Republicans would welcome the tariff as the leading issue of 1892, while, at the same time, neither they nor their opponents can make it a leading issue if any more exciting question arises. This is especially true in this instance, because the tariff does not belong to that class of public questions which cannot be put aside until they have been brought to a final settlement. This arises, in the first place, from the nature of the subject. The tariff is an economic, a pocket question—a question as to what will pay best. It is in no sense a moral question, and can never be made one, although there is a certain cant to that effect which is often employed by some followers of the Manchester school. In the second place, the tariff is an old and continuous question. I am aware that some of the most fervent tariff-reformers appear to think that it is a new question and that it began when the country was so fortunate as first to behold them upon the stage of public life. None the less is it historically true that the tariff question has been with us ever since the foundation of the government. There have been recurring periods when it has been the leading and controlling question at elections and has settled the fate of parties. There have been other periods, also, of long duration, when the tariff has been pushed completely out of sight by issues which were believed to be vastly more momentous. Undoubtedly these periods of both kinds will occur again. Such a process is, of course, perfectly natural, for the economic policy of a country, its expenditures and its methods of raising revenue, must always be open political questions, and the very fact of their permanence makes it easy to set them aside for the time being, when any other question of equal or greater magnitude rises up and demands settlement. There would be, therefore, nothing either strange or unusual if the tariff were to be pushed aside in favor of some other question, to recur again when that particular question had been settled and no

new one had taken its place. The only point, therefore, to be determined, is whether a new question of the requisite character and importance has arisen.

It seems reasonably clear that this more exciting question has come in the matter of the free coinage of silver. This issue finds its strength in various sources, some general and some particular. In the first place, there are always a good many people who are captivated by the cry of "cheaper money." Just now, in many sections of the country, from one cause or another which it is not necessary to enter into here, there has been sufficient financial stringency to make the demand for cheaper money peculiarly strong and widespread. But that which at this moment really forces the question of free coinage of silver so strongly to the front is the fact that it has been made a test question by large bodies of voters who have been drawn into certain new political movements, of which the most conspicuous is the Farmers' Alliance. These movements are not confined to farmers or to men of any particular occupation. Careful observers of political conditions know well that in the last few years a wave of unrest and of dissatisfaction with existing social and financial conditions has been passing over the country and has had many and varied manifestations, chiefly of a socialistic tendency. The interest which questions of this character have at the present moment, to take a single example, is illustrated by the sale of Mr. Bellamy's book, and there can be no doubt of the extent of these movements. Their intensity has not yet been measured, nor have we any means of determining their probable duration, although it is obvious enough that they show, in their present forms, no signs of permanence. The organizations which have given practical expressions to these feelings and desires have put forward many propositions and made many demands. Most of these propositions are so far-reaching, and some of them are so obviously visionary, that even their authors are well aware that they are not, for the present at least, practical issues. Moreover, large bodies of men tend always toward a simple and concentrated expression of their wishes. Some one question is sure to come out of the mass, which is made the test of loyalty and victory alike, and toward the success of which its promoters bend every energy. In this case the test question happens to be the free coinage of silver, behind which lies the additional demand for cheap money. The free-silver movement originated, of course, long before the present agitation began. It finds support among large bodies of peo-

ple who have no sympathy or connection with the general readjustment of social and financial arrangements which organizations like the Farmers' Alliance are demanding. But for this very reason, free coinage becomes a peculiarly available issue for men who are bent on political changes of a much more fundamental and far-reaching character, because they can get for unlimited silver, sympathy which would never be yielded to their other principles. Therefore we see to-day the free coinage of silver coming more and more to the front, while the opposition to it, an essential condition in making up any issue, is as strong and determined as the forces united in its support.

The attitude and condition of the two great parties tend, also, strongly in the same direction. In the last Congress all the Democratic senators but two voted for free silver, while in the House the Republicans who voted for free silver, a small minority of less than thirty, were almost exactly balanced by the Democrats who voted against it. The Republicans, as a party, took a position of resistance to free coinage. The Democrats, as a party, proved themselves, by an overwhelming majority, to be the friends of the free coinage of silver; and they have control, by a very large majority, of the next House of Representatives. Many Democratic leaders believe, also, that free coinage, if advocated and sustained by the Democratic party, means a Democratic president next year, and they will, of course, force the fighting on that issue so far as they can, from political interest if from no other motive. Thus the two great parties have come on this point to the open antagonism necessary to the making of a leading issue. Then, again, the attitude of the Farmers' Alliance toward the two great political parties, which is necessarily a great factor in forcing on this question, has been very different, and has strengthened existing tendencies. In certain Republican States, the farmers shattered and defeated the Republican party, and forced that party, whether it desired it or not, into an attitude of bitter opposition. At the same time, in some strong Democratic States, they have secured complete control of the Democratic party. Therefore, while it is comparatively easy for the Republican party to stand, as it has always stood, for honest money, because the men who are defending free coinage have fought it on every occasion, these very forces control the Democratic party, elect its legislatures and delegates, and have the power to shape its policy. As the foe of the Republicans and the controlling ally of the Democrats the Alliance can select its own issue until its power begins to wane.

The probable course of events works in the same direction. There can be very little doubt that the next Congress will pass a free-coinage bill. I have not heard of any one either in or out of Congress or of either party, fitted by experience or observation to judge, who doubted for a moment that such a bill would go through. If a free-coinage act passes the next Congress it is equally true that no one doubts that President Harrison will veto it in the interests of honest finance and sound business methods. Should this happen, as it is not believed that the bill can pass both branches over the presidential veto, it will leave the question open to be settled at the polls in 1892, while the position of the parties upon it will have been sharply defined by the action of Congress and of the administration respectively. Whatever difference may exist within the parties upon this question, the conditions are such that one must sustain and the other oppose it. They cannot both get upon the same platform in regard to it, and it therefore seems inevitable that the free coinage of silver will be the leading issue in the next campaign, the one upon which most popular feeling will be excited and upon which most votes will turn.

It is not at all to my purpose, and it would be entirely out of place here, to argue the merits of this question or to attempt to predict the results with reference to it at the polls. I may be easily mistaken in thinking that the question will follow the precise course that I have indicated, but I have no manner of doubt that the question of the free coinage of silver, which is only part of the larger question of cheap money, must find its final settlement at the hands of the voters of the United States, and that such a settlement can be reached in no other way.

Next to the question of free coinage will come undoubtedly the question of the tariff, and upon that there is no need of entering into any elaborate statement. The positions of the two great parties are perfectly defined and the discussion of the principles involved has been constant of late both in the press and on the platform. The issue will be changed from that of 1888, in that the Democratic party will no longer have the covering cry for a reduction of the surplus. The question this time will be the naked one of whether we shall abandon the protective policy and construct a free-trade tariff after the manner of England. This will simplify the issue and make it easier of intelligent settlement. As I have said, the Republican party is more than ready to meet that issue, and the Democratic party, I have no doubt, is in the same frame of mind. How great a part the tariff will play

in the election of 1892, however, depends not upon the action of parties but upon the development of the free-coinage question and upon the state of public feeling in regard to it. If the public mind on one side and the other comes to the conclusion that the greatest advantages or the greatest dangers are to spring from the currency question, that question will override all others. The present tendency seems strongly in this direction, but in any event, we may say with reasonable certainty that free coinage and the tariff will form two leading issues of 1892.

A third question of equal magnitude and greater importance will be that of honest elections and ballot reform. This will be an issue of general principles and not of specific measures, because the next Congress will, of course, do nothing in that direction. It is, nevertheless, a question which will play a great part in the United States until it is settled and settled rightly; for there are large bodies of voters who will never abandon it until wrong-doing at the polls is done away with. On this question, too, as on the tariff, the positions of the great parties are sharply defined.

Such are the leading questions as they look to-day, but it must be remembered, also, that in every campaign there are commonly a certain number of lesser issues which may not be controlling, but which are not without weight and effect. These lesser issues always affect a certain number of votes, and where the voting is close they may, in some States, prove decisive. To this class of questions belong those of an administrative character, of which the most important and most conspicuous is civil service reform. To that reform both parties are pledged, and votes affected by it are determined by a comparison of the records of the two parties in this particular. The proper conduct of the government business, honest and respectable appointments, and the removal of the routine offices of the government from politics, are of the highest importance and, in the minds of many persons, occupy, not without reason, a leading place. That these questions will enter into the campaign of 1892, in a minor degree, cannot be doubted, and that they will influence many important votes is equally unquestioned.

Then there is, besides, a question of a widely different kind which ought perhaps to be considered in any enumeration of the probable issues of next year. This is the question of immigration. It is still in the first stage of development, and is a question of the future, although, it is to be fervently hoped, of the very near future. Its im-

portance cannot be over-estimated, for it touches directly the quality of American citizenship and the wages of American workmen. The public mind is not yet so far aroused upon it that it is likely in the next election to be in any sense a dominant issue, but at the same time it is receiving every day more and more of the public attention, and those who are taking it up, and who are coming to feel that it is the gravest subject before the American people, are the most earnest and thoughtful men in the community. It is a question which cannot be put aside, and the action of the two parties upon it may have, if not a decisive, at least a powerful effect.

These seem to me the only questions which are likely to affect the next election in any large way. There are, of course, many other subjects of interest and importance, sometimes to localities, sometimes to the people at large, but none are of a nature directly to affect votes. Presidential campaigns may be decided by two or three questions, but as a rule they settle only one at a time, and this is in all probability the safest way. Lincoln's aphorism about never crossing a bridge until you come to it is one which finds general sympathy among the American people. They prefer to settle the most pressing question at a great election, and to take the next when the time comes for it. Whether the issues will come as I have defined them, no one of course can say, for this is a world of surprises, and events might occur to-morrow which would change absolutely the political aspects of to-day. We, however, can judge only from the conditions of the day that is passing over us, and it seems to me that the next presidential campaign will have for its leading issue the free coinage of silver. Then will come the tariff and ballot reform, and then those questions of less prominence which concern the records of the parties in the administration of the government and their policy as to the restriction of immigration.

HENRY CABOT LODGE.

THE GROWTH OF INDUSTRIAL CAPITALIZATION.

THE conversion of well-known trading concerns into limited companies, although of comparatively recent date as a department of finance, has assumed enormous dimensions in Great Britain. This development of industrial investments is due partly to the rapidly increasing growth of England's wealth; partly to an inherent love of speculation and outside investments on the part of a maritime people, accustomed from time immemorial to cast their bread upon the waters and find it again; and partly, no doubt, to the fact of an over-demand for British government securities, and, until quite recently, to a lack of subdivision in the latter to suit the requirements of small investors. Another cause is, no doubt, the growing conviction of the relative worthlessness of certain foreign government securities, such as those belonging to Turkey, Egypt, Spain, and kindred governments. Of late years, too, there has been a waning in the attachment to the securities of the great European countries, which habitually groan under heavy armaments and are apparently always on the eve of war. These considerations have gradually forced English investments into a healthier channel, and in the direction of home securities, or those of countries like the United States, which are removed by their position from the danger of foreign entanglement and have means of unlimited expansion before them.

Among other and less understood causes is the development of the British banking system, which, by reason of the large sums of money at its disposal, has been tempted to extend greater facilities than were warrantable in the way of discount to young traders with small capital. The old commercial houses, employing ten times the capital of their youthful rivals, and feeling the keenness of the competition, have grown tired of keeping a large balance with their bankers which the latter employ to discount their rivals' paper, and have deemed it expedient to reconstruct their business according to modern ideas; or, in other words, to capitalize the old established trading concern, so as to give it all the modern facilities for meeting and crushing the growing opposition. Simultaneously with the desire on the part

of the owners to capitalize their business, there has occurred, very opportunely for them, something of the character of a revolt in the British mind against the ordinary class of investment provided for its consideration—a revolt somewhat analogous to that which is keeping the American public out of Wall Street now.

At the commencement of the new joint stock era Great Britain was mainly occupied in providing capital for home operations. When that demand ceased she turned her attention to her colonies and to foreign countries. On looking back it cannot be said that she always exercised a wise discretion in lending her money. In her search for high-paying investments her wealth "larded the green earth" of every country on the face of the globe, even of many that were only half civilized, and her loans saddled her colonies with debts disproportionate to their condition, under which they labor to this very hour.

According to the most reliable data obtainable, Great Britain is saving £160,000,000 per annum. This wealth, in the hands of a speculative people, unprovided with a suitable outlet for it, caused the outlook to appear serious to those who understood the situation. Under such circumstances the introduction into the market, three or four years ago, of commercial or industrial securities, was absolutely a godsend. Here, at last, apparently was a class of securities such as the people had wanted all along, such as they could understand, and such as had long-continued success in the past as their guarantee of success in the future.

The growth in numbers and in rapacity of the London "promoters," in spite of continued legislation designed as a safeguard to the British investor, had flooded, up to that time, the London market with gold, silver, and nitrate mines, development companies, exploration projects, and schemes of speculation in the heavens above, on the earth beneath, and in the waters under the earth, until the prudent investor refused to find capital for any more visionary enterprises. Had this objection been maintained by all alike, the dismal record of the Argentine Republic would never have existed to point a moral or adorn a tale. From the period of this revolt, however, the great stream of English capital seems to have divided itself, the one branch hurrying on to disaster—or, in other words, to South America—and the other holding the even tenor of its way, free from the vicissitudes which befall untried schemes in the realms of unstable governments.

The London promoter was very much neglected in the formation of the companies organized to take over the large trading concerns of

Guinness, Watney, and Bass, which were brought out by the then great house of Baring Brothers, the London and Westminster Bank, and the banking house of Sir Samuel Scott and Company. The new industrial movement may be said, indeed, to have hastened the extinction of the London promoter as an individual. The situation, as amended, demanded men of better reputation and of larger calibre. Before any great trading concern would allow its property to be offered to the public, it was clear that it would be necessary to insure its acceptance in order to avoid the return of the property to the owner, damaged by the stigma of public rejection. At this juncture the financial underwriter first came into existence as an institution, and a number of trust, investment, promotion, and underwriting companies were formed to meet the new conditions. A score of these new companies, taken at random, show a capital of £22,000,000, and they are supported by many of the most reputable names in London.

The improved auspices under which the new trading companies appeared, and the success which they gained, lent to their securities a tone which they have never lost; and to-day the four-and-a-half and five-per-cent. debenture bonds, and the six-per-cent. preference shares of the three companies named, stand higher as to market price than the very best railroad bonds of similar rates in this country, as will be readily perceived from the following figures:

Bass & Co., English brewery, 4½% debentures, present market price,	120
Baltimore & Ohio Railroad 4½% bonds, " " "	100
Lehigh Valley 4½%, present market price,	101½
Guinness & Co., English brewery, 5% debenture bonds, present market price,	121
Watney & Co., 5% debenture stock, present market price,	118
Chicago, Milwaukee & St. Paul 5% bonds,	104
C. B. & Q. 5% bonds	102½
Jersey Central 5% bonds,	108
Guinness & Co., 6% preference shares,	157
Rock Island Railway, 6% bonds,	117
New York, Ontario & Western, 6% bonds,	116
Norfolk & Western, 6% bonds,	120

It will be seen further on that a considerable improvement on the par price of the bonds and stocks is the rule in such securities, and not the exception. In fact, it may be said with regard to the whole class of industrial securities, that in spite of losses here and there from lack of care, cupidity, dishonesty, or negligence, they have paid exceedingly well on the whole, and that the later investments pay

better than the earlier ones. Last year a prominent London financial paper gave particulars of 331 British companies (exclusive of railway, banking, insurance, and kindred incorporations) which show "a total profit in the appreciated value of their shares and in the aggregate sum paid in dividends, of no less than £214,346,485—a gain to the stockholders of at least 50 per cent." These figures relate mainly to industrial, commercial, and investment companies.

Glancing at the latest official price-list of the London stock exchange, I find that in the case of 15 representative and unselected companies, chosen on account of the facilities which they afford for comparison on all points, the total capital is £33,579,000, and the market value, in spite of the prevailing depression, is £39,433,730. This gain of £5,854,730 on a capital of £33,579,000 is equal to nearly 25 per cent., a most remarkable showing considering the present condition of the London market, and considering that 88 per cent. of the capital stock are debenture and preference stocks, and that less than 10 per cent. of the whole is ordinary or high-paying stock. These figures relate to brewery companies, which are selected, as already stated, solely on account of the uniformity in class, it being difficult to find an equal number of companies so precisely alike in character as to admit of their being placed upon a common plane in comparison.

The industrial or commercial companies received so much favor at the hands of British investors that before long the United States were ransacked for properties of the kind suitable for the British market. Among the British companies working prominently on this side were the Trustees', Executors', and Securities' Corporation of London and the City of London Contract Corporation. These institutions launched company after company, each embodying an American property, on the London market, and, on the whole, with very conspicuous success. They went about their work in a business-like way, and in a manner that recommended itself not only to the firms whose business they sought to acquire, but also to the American investing public, who, from being mere uninterested onlookers, became stockholders to quite a considerable extent.

There is no doubt that a very large share of the success which has attended these American capitalizations in Great Britain has been due to rigid scrutiny of the properties. The breweries acquired were first carefully examined by an English brewer. The real estate, machinery, and other tangible assets were then valued by competent appraisers, while the books were being examined by the accountants.

The duties performed by the latter gentlemen in this country were of the most onerous description. In many instances it was found that there had been no pretence at all of intelligent bookkeeping; in some cases profits had even been purposely obscured to avoid taxation. No allowance had been made for the depreciation of plant. Generally speaking, every principle of sound bookkeeping had been neglected. Probably no better accountants ever entered upon an investigation than were sent over here to examine the books of intending sellers. They were men of vast experience and of such a reputation that when they certified to certain profits their voucher was as good as that of the governor of the Bank of England, and the British public never thought for a moment of going behind it. That they did their work well, and that the valuation based upon their report was accurate, may be gathered from the fact, recently mentioned in the "Financial News" of London, that "after inquiring particularly into their position [that of American breweries capitalized in London] it was found that the ordinary stock of the 22 companies was yielding an average of 13½ per cent."

It may be here stated that the present system of capitalizing trade concerns not only emphasizes in a very marked degree the necessity for the employment of good bookkeepers and for an accurate and complete system of bookkeeping, but also indicates a necessity for having the accounts audited periodically by some really first-class firm of auditors. No mere confidence in any system of bookkeeping, or in any staff, however reliable, should induce the neglect of this precaution, necessary not only for the well-being of the house, but also for an accurate apprehension of the condition of the business.

At first sight of the British efforts among our commercial properties, our capitalists were disposed to sneer at their English cousins and to predict that their dismal experience in the past with some of our mines, railways, and cattle companies, would be as nothing to what they would suffer in a year or two from the purchase and capitalization of their manufacturing properties. They failed to recognize the difference between embarking in a speculative or untried business or venture, on the representations made in a gorgeous prospectus, and investigating on the faith of profits already earned, certified by competent accountants of unimpeachable integrity with a marvellous faculty for wresting the truth out of the most tangled accounts.

On closer observation, however, they found that there was method in the foreigners' madness and that the new departure of incorporat-

ing trading concerns whose securities would have a ready quotation on the stock exchange, was likely to prove profitable to all concerned.

The points of advantage which they recognized undoubtedly derived especial value from the phenomenal dulness of the New York and other eastern stock exchanges, standing idle under the public neglect of railway securities, affected injuriously by London's stringency, and in a state of depression arising from the prevailing uncertainty as to the outcome of the free-coinage agitation.

Chicago was, however, more prompt at the outset to apprehend the real value of the movement and to see in it something destined to occupy thenceforward a commanding place in its finances. It welcomed the incoming idea with open arms, took large blocks in English companies formed to acquire properties in Chicago, and, when it was proposed to form an international company for the purpose of promoting industrial capitalizations, promptly subscribed $5,000,000 to the new organization.

Among the first trading concerns to be capitalized publicly in New York, when the latter asserted her rightful place in the financial arena, was the business of H. B. Claflin and Company, with a capital of $9,000,000, which was subscribed five times over. London never gave a heartier reception to any company than to this, the first of the purely American joint-stock enterprises received there. The extraordinary success of the issue showed that American investors had at last found out the richness of the lode which England had been working so industriously in this country, and were doing their best to secure for themselves some share of the profits which the lode was yielding. The example set by the Claflins was promptly followed by the Thurber-Whyland Company, with a capital of $3,000,000, the John B. Stetson Company, with a capital $2,700,000; the P. Lorillard Company, with a capital of $5,000,000; and the Trow Directory Printing and Bookbinding Company, with a capital of $1,500,000. These corporations were not brought out by investment companies formed for the purpose, but by the greatest houses connected with the New York stock exchange, and in association with the most prominent bankers of the same city. They all received a hearty welcome from the public, and most of them were very largely over-subscribed.

From the results attending the public issue of these companies, it was manifest that the wide advertisement given to the operations of the English syndicates in this country and the success which had attended their efforts, had not been lost upon the public at large. In

the prospectus of the London and Chicago Contract Corporation it had been stated that the City of London Contract Corporation, which launched it, had placed American properties of the value of £16,000,000 on the London market. This statement had roused the flagging interests of the domestic investors, whose eyes had been set with a fixed stare on the railway horizon, which, instead of lightening, seemed to grow darker day by day. If the attractions of American manufacturing properties were such that they could be seen three or four thousand miles away, and were good enough for prudent British investors to put three or four hundred million dollars into them, then surely they were good enough for home use. That was the whole argument in a nut-shell, and the success of the domestic capitalizations brought out in New York proved how forcible it was.

But the movement did not spring suddenly from one side of the Atlantic to the other. Prior to the home capitalizations referred to, several large international companies had been formed for the purpose, *inter alia*, of issuing the securities of new trading corporations simultaneously in London and in New York. Among these powerful corporations were the London and New York Investment Company, the United States Trust and Guarantee Corporation, and the Anglo-American Debenture Corporation. Each of these started with a very large capital, that of the last-named being £3,000,000, and they number among their "founders" the very best names to be found in New York and London. Thus far these companies do not appear to have taken any prominent part in introducing commercial investment securities to the public. This probably is due to the unfavorable conditions in London for international action of the kind, and to a clear-sighted recognition of the fact that purely domestic issues had better be placed by home concerns. No doubt their vast investment business will afford them occupation enough until the London horizon clears.

The investment companies alluded to, formed in England as a corollary to the industrial-capitalization movement, are worthy of particular notice. They enabled the British investor to spread his risks over a number of securities of a similar class. They further increased public interest in the industrial movement by bringing into it their own stockholders and debenture-holders. Some of these companies have individually invested their funds in more than two hundred securities, showing an average of from seven to ten thousand pounds put into each company. In addition there are preference security investment companies and debenture investment companies, which

show the same subdivision of security while restricting themselves to the class named in their titles. These companies, whose articles of association usually prohibit them from investing more than from five to ten per cent. of their capital in any single company, not only divide their risks over a wide area, but also obviate the concentration of their securities in any one district. The following particulars of the investments of one company will illustrate their variety and scope:

"Invested in industrial concerns, £777,879; in the colonies, £712,826; in financial and land investments, £454,170; in government and corporation loans, £169,518; gas and water companies, £35,537; banks, £21,628; tramways, £11,453; insurance concerns, £2,657; invested in Great Britain, £794,797; in the colonies, £91,411; in the United States, £782,786; in North America, £177,279; in South America, £223,478; in Europe, apart from places mentioned, £101,252; in Asia, £15,327; and something in Africa."

In the case of this company the securities numbered 220. Institutions like these have no doubt tended to popularize industrial securities, and thus far they have been very successful. They are in a position to obtain better information about any single security than the ordinary investor, and they permit the latter to share in the advantages of their better selection as well as in the average afforded by the variety of securities which they hold. For the first time in their history, England and Scotland have joined hands in promoting the same companies, namely, those investment institutions referred to, and the union is no small tribute to the value of the new institutions.

In glancing at the different ways in which English and American companies have been capitalized, there will be found many interesting points of divergence. In the case of twelve American trading concerns incorporated in London, the average debenture, preference, and ordinary capital were respectively £248,833, £194,513, and £248,333; these companies divided their preference and ordinary or common stock into fully-paid shares of the denomination of ten pounds; the debentures were in sums of £100 or in multiples thereof; the preference share uniformly carried an eight-per-cent. cumulative dividend, and with one exception the debenture interest was at the rate of six per cent. per annum. There were different methods of redeeming the debenture bonds, the more common being either by means of a sinking fund and annual drawings, or by redemption at a premium of ten per cent. at the end of ten or twenty years.

In the case of English concerns capitalized at home, the debenture rate of interest ranges from four to six per cent. and the preference

dividend from five to eight per cent. One noticeable feature about the English companies, whether domestic or international, is that they always endeavor to secure the three kinds of securities which are supposed to cover all the three classes of investors known to finance, namely: the ultra-conservative, as represented by the mortgage debenture bonds; the prudent investor, as represented by the preference shares; and the slightly speculative investor, who likes the ordinary stock. To be without any one of these classes is, the Englishman considers, to weaken by one-third his chances of a full subscription.

It might be supposed that the denominations of all English securities are the same. Such, however, is very far from being the case, as will be seen from the following table of the companies formed in London during one month of the current year:

84	companies	with	shares	of	the	par	value	of..... £ 1 each.
31	"	"	"	"	"	.....	£ 5	"
52	"	"	"	"	"	... .	£ 10	"
4	"	"	"	"	"	.....	£ 50	"
14	"	"	"	"	"	.....	£100	"
1	"	"	"	"	"	.....	£250	"

The total capitalization of these companies was £9,393,000, and certainly the different par values are, to say the least, calculated to be unhandy in dealing with them. All companies of the speculative or what might be termed the "frivolous" kind, seem by common consent to fix the par value of their shares at one pound each, fully paid. With the exception that the five-pound share is usually only an improvement in class on the one-pound share, and that the largest denomination of share generally represents a shipping interest, there is no other rule or custom governing the denomination of the shares. In bringing out their companies, English promoters also show some cunning in angling for the investor by making the amount which is payable on application as low as possible, and by spreading the instalments over a longer period than is common in this country.

The New York houses of issue who have undertaken the business of inviting public subscriptions to the securities of incorporated trading concerns have undoubtedly improved very much upon the model with which England has supplied them. First of all, they wisely make it a condition that each new company shall start free from debt, and so the mortgage debenture bond is entirely dispensed with in their case. While this arrangement apparently restricts the class of investments to preference and common stock, it does so only in name,

for the preference stock is virtually a first charge against the assets of the company, as it is protected by a clause in the articles which provides that "no bond or mortgage shall be created without the consent of 90 per cent. of the preference stockholders" and that this provision shall not be altered except by the like affirmative vote. Under this arrangement the eight-per-cent. cumulated preferential dividend of the average American commercial investment company must be considered as one of the most attractive securities to be found anywhere. The British-American industrial companies, it is true, have eight-per-cent. preference stocks, but these are preceded by an equal amount of mortgage debenture bonds, which, by virtue of their superior security, carry a very much smaller rate of interest. This eight-per-cent. American rate has raised the inquiries whether such a high dividend does not mean a doubtful security, and why companies should pay so much for their capital when railroad companies in good credit can borrow at five per cent. This criticism arises from an entire misconception of the case. These companies are not borrowing money; if they wanted to borrow they could undoubtedly obtain whatever they require on mortgage debentures, at as low a rate as the best railroads, just as similar companies are doing all the time in Great Britain. The preference stockholders are partners in the concern, and the terms on which they agree to become such are made as equitable as possible, looking to the security which the two classes of partners take. While eight per cent. would probably be regarded as an excessive rate at which to borrow money, by a first-class company of undoubted credit, it is certainly not too large a dividend to promise to any one invited to enter as a partner into an established concern which regularly pays much larger dividends on the whole of its capital. If the preference stockholders are willing to accept 50 per cent. less dividend on their money than the ordinary stockholders will receive, on condition that they have a prior lien on the dividends and assets of the company, the arrangement is, without doubt, an eminently fair one. The eight per cent. rate is therefore not an extraordinary inducement for people to invest their money in an untried business; on the contrary, the introduction of industrial and commercial investment securities in London originated in a revolt in the public mind against finding capital for new and untried enterprises.

One of the most important improvements upon English methods is the homogeneousness of interest created between the company and its employees by affording the latter opportunities to become stock-

holders in the concern. This feature of profit-sharing is of paramount importance, and its value is greatly emphasized by permitting the employees to have a representative on the board, as in the case of the Trow Directory Printing and Bookbinding Company. Concerning this system of profit-sharing the London "Economist" says:

> "It is found that there is greater diligence; suggestions for economizing expenses are from time to time made by the men, and a new interest is shown in the work, and the results are such that no mere skill in superintendence could have brought them about."

By this system the benefit to the employees comes in an immediate and tangible form, inasmuch as it is receivable in cash and does not assume the shape of some future, and, it might be, posthumous reward, while it has nothing of a charitable character attaching to it.

The greatest source of anxiety in incorporating business concerns is to be found in the general fear that the public will anticipate a general looseness of management in the company which did not exist in the firm. Long experience in Great Britain and in other countries has proved to be utterly groundless the apprehension that no man would work as well for another as he would for himself. As a matter of fact, it has been found that the reverse is the case; the worker has the same energy and principle under both conditions, while the systematic supervision undoubtedly acts as a spur to his efforts. Still, the creation of an identity of interests between the corporation and the employees restores the feeling of ownership, and removes any fear of its lapse; while, at the same time, it adds to the business the discipline of the corporation. Other features of the new companies which are entitled to notice are the uniformity in the denomination of their securities and the convenient sum at which they have been fixed by common consent, namely, $100 per share.

Looking generally at this question of industrial security, there are many substantial reasons why the present movement for the capitalization of well-selected trading concerns in this country should continue and grow in volume. The United States are to-day the wealthiest nation on the globe, and there is probably more money hoarded here by capitalists than in any other country in the world, chiefly because the field of investment has not been intelligently and diligently cultivated and marketable securities of a suitable class have not been forthcoming for the investor. The $1,000 railway bond, although here and there of undoubted merit, no longer, as a class, meets the

requirements of the small investor. It is inconvenient in amount and, although yielding a very moderate return indeed, it is, as a whole, of very uncertain value. Farm mortgages and municipal bonds, whatever may be the security they offer, are not generally in favor because they are not readily convertible upon emergency.

In Great Britain commercial investment securities have attained a very high value, and there is no reason why the success which they have reached there should not be repeated here—even excelled, indeed, because there are many excellencies in the properties offered here, and in the form in which they are presented, that are not apparent in the English companies. According to a recent computation based on the returns of the census office in connection with the State of Iowa, it is estimated that the mortgages on the homes and farms of the United States occupied by the owners amount, in round numbers, to $2,565,000,000. While this undoubtedly shows a great borrowing capacity, it also shows how enormous are the funds available in this country for investment. These funds are even growing much more rapidly in proportion than the national wealth itself. This greater ratio is due to several causes, but chiefly to the liquidation of the national debt and to the rapid growth of the assets of trust corporations, insurance corporations, savings banks, and other institutions of the kind, which are accumulating funds for investment.

Simultaneously with the growth of the country in wealth, and a still greater proportionate growth in the funds available for investment, occurs a contraction in the demand for capital for railroad purposes and in all other channels where it can be utilized by the general investor. This is not a condition of the hour only, as there is no doubt that the unscrupulous conduct of many railway directors and their utter contempt of the interests and opinions of their stockholders have at last saturated the public with an utter distrust of properties of the kind, and it will consequently be a very long time before confidence can be regained and any business worthy of the name can be done in railway securities. Meantime, this plethora of means and paucity of good investments is concentrating capital unduly in city real estate and in other channels where the results can be only unhealthy inflation and, by-and-by, serious loss. The industrial security is a remedy for this serious condition of affairs, for the prior liens or preferred stocks of industrial companies with a sufficiency of tangible assets, are at least as safe as the ordinary farm mortgage or municipal bond, while they have the enormous advantage over both of being readily salable, be-

cause the first care of those in control of such companies is to obtain a quotation for their securities on the stock exchange.

In handling industrial properties this country has the great good luck to have placed within its reach all the experience which England, at much labor and cost, has gained in this business; so that there is no necessity that we should begin at the beginning and incur all the losses and worries incidental to the opening up of a new field of finance. Upon such questions as "the liability of promoters," "reckless or false appraisements of properties," "the value of accountants' reports," and the like, we can find on record in Great Britain the latest opinions of the best-trained and the most experienced legal talent. The entire field of corporate industrial and commercial capitalization is marked out for us by well-trodden paths and an abundance of luminous finger-posts, and it will be our own fault if we wander out of the beaten track or tumble into any of the pitfalls placed for the unwary.

There is one point which should not be overlooked; some of our great industrial enterprises require as large a capital as the smaller of our railways, and they are every whit as fit subjects for corporate enterprise. While it is true that there is a kind of indestructible permanency about railway property which lends it especial favor in the eyes of some investors, there are numerous disadvantages attaching to it apart from the character for general unreliability of many railroad directors, which tends to detract from their popularity as an investment, in the opinion of others. There is no reason why a large, well-established manufacturing business should not afford as permanent security as a railway, or why its stock should not command as high a price. As a matter of fact, it will be seen from the figures already given that the securities of good industrial corporations stand far higher in price than the very best railway securities in this country bearing the same interest.

From the trader's standpoint, the capitalization of his property is especially advantageous. It secures the permanency of his business; it removes from his mind all worry as to his successors, and in the event of his death his executors can find a ready sale of his stocks at the very highest market price without re-valuations or arbitrations, and without raising any of the thousand points of conflict, legal or otherwise, which are apt to occur at such a time. From whatever standpoint it is viewed, whether from the point of view of the stock investor unable to find a suitable opening for his superfluous funds,

or from the point of view of the manufacturer, who, although he has earned as much money as he cares to possess, is yet consumed with anxiety as to the future of his business, the corporate capitalization of industrial properties has everything to commend it.

With regard to the houses of issue which have thus far been identified with the business of incorporating commercial establishments in New York, it can truthfully be said that they have begun well. The prospectuses which they have issued have been models of clearness and moderation. They have very properly considered the selection of directors of the very highest standard and capacity as of paramount importance, and have succeeded in securing for their companies gentlemen of undoubted standing and experience, and such as will impart confidence to the most timid stockholder. They have succeeded also in introducing securities which are in appearance of a thoroughly sound and marketable character, and they have taken the first step toward educating the people of the United States to the value of good, sound, commercial securities based upon industries which they can understand and, if they wish, overlook. It is a popular fallacy to suppose that country people care nothing about securities outside the area of their own district. The reverse is the case. The great shipping interests of England are supplied with capital not from the coast towns or maritime districts, but from the inland cities and villages. And so it is with other investments; persons who might be thought least likely to do so open their money bags or draw their checks to subscribe to new securities, of a class in which one would think they would feel little or no interest. When this country shall have been educated to discern between good and bad securities, as is England, which contributed £160,000,000 to new capitalizations in 1889, and as is Germany, which contributed £80,000,000 during the same year, the result here will be as satisfactory; for the per capita wealth of this country is greater than that of Germany or of England.

J. Selwin Tait.

THE FUTURE OF THE ELECTRIC RAILWAY.

THERE are five kinds of railway service, each having its peculiarities and requiring special consideration. That which is of every-day importance is the street-surface system, operated by horses, cable, steam dummies, or electricity. Then there is local rapid transit, such as is given by the New York elevated railroads, the underground railway of London, and the viaduct road in Berlin. Next is suburban traffic, generally attempted on the same rails as through traffic, but now often confined to routes of its own, as on the suburban section of the Illinois Central at Chicago. There is also the through trunk-line express and way passenger service, and, finally, freight transportation. Given a medium capable of transmitting energy over great distances without time limitation, independent of the laws of gravity, sensible to neither heat nor cold, which while, like all other forces, subject to vagaries when improperly applied, is still capable of the most positive and instantaneous control, what are its possibilities in replacing the existing means of train-propulsion? Its application to one class—the first mentioned—is now simply a matter of history, and displays an almost unprecedented development. That history is instructive.

Only twelve years have elapsed since the first crude suggestions of the practical working of an electric railway were made, and four years ago a list of a dozen would comprise every such road in the world in even passably successful operation, whatever the method of application. The first large commercial electric railway was, after many difficulties and discouragements, opened in the early part of 1888 at Richmond, Va., and since that demonstration was made the industry has grown until there are now in operation or under contract, on the general lines laid down at Richmond, not less than 350 roads in the United States, Europe, Australia, and Japan, requiring more than 4,000 cars and 7,000 motors, with about 2,600 miles of track, a daily mileage of nearly 500,000 miles, and carrying nearly a billion passengers annually. Fully 10,000 people are employed on these roads, and there has never been an authenticated report of death on

account of the electrical pressure used. Over $50,000,000 are invested in this industry in this country alone.

Of the three methods of application—the storage battery, the conduit, and the overhead wire—the last-mentioned alone is an admitted success, and must, for many practical reasons, hold, for a long time at least, the supremacy. Without discussing the more or less sentimental objections against overhead wires, many of which utterly fail when a system is properly constructed, it is well briefly to note what the introduction of electric railways has accomplished.

While the horse, with extra help, has slowly and painfully pulled his car up a five per cent. grade, the electric motor has propelled a car of double the weight up grades of from 10 per cent. to 13 per cent., and at nearly double the speed. It has conquered combined curves and grades impossible for even the cable, and has increased the schedule speed with perfect safety from 50 per cent. to 100 per cent. Larger and more luxurious cars have been made possible, and the available carrying capacity for a given street space occupied has been increased by one-half. The loose-jointed, light-weight, badly-laid tram and centre-bearing rail is giving way to a substantial, smooth, perfectly-built, and rigid road-bed. Paving is no longer dependent upon the necessities of the car horse, and whatever is best outside of the rails can now be used between them. Malodorous stables have disappeared, and streets been made cleaner. Types of neat, strong iron poles, unknown to constructors of telegraph and telephone lines, have been developed.

The action of the motor as a dynamo is utilized to make the descent of the heaviest grades absolutely safe, even if the whole system exterior to the car should fail. This consideration alone was one of the most powerful in influencing the Italian government to allow the re-opening of the Fiesole line at Florence after an accident caused by a car jumping the track at a badly-laid curve prior to the adoption of this system of braking.

The abolishment of the car stove is now possible, and on heavy grades the falling energy of the car is used through the motors not only to put a brake upon its own speed, but also to heat the car without taking energy from the central station, as on the Pleasant Valley road in Pittsburg.

The electric motor has halved the motor-power expenses per car-mile, and has effected even greater reduction in the cost per ton-mile. It has reduced the charge per car-mile for conductors and drivers, by

increasing the number of miles operated in a given time. Roads hitherto unproductive have become dividend-earners, and the earnings of those already successful have been increased. Roads are now possible where horse, steam, or cable service was impossible. Years have, in the aggregate, been saved to men for rest and recreation.

Animal life has been extended, and the *morale* of the employees has been raised; for a man assumes something more of dignity and self-respect when given control of a power whose functions are mysterious, rather than when stifling every feeling of humanity to urge on tired horses under spur of fine or dismissal. And last, and not the least important influence that the electric railway has exerted, although only after long and bitter contests, has been the hurrying forward and making necessary of improved telephone service.

The influence of increased speed merits special attention. The objections raised to it in surface traffic, and especially in the residential portions of towns and smaller cities, have proven of little weight. Municipal regulations often limit the maximum speed, but it is safe to assume that there is not a single instance in which this limit is not exceeded. When the streets are of sufficient width, and people understand that high speed *will* be maintained, they soon adopt the policy of wisdom, and keep out of the way of electric cars, and the residents themselves find their objections effectually soothed when enjoying the advantages of rapid transit. High speed in not over-crowded streets, is, after all, a matter of education, and with the control existing in the case of the electric car, this education is very rapid. I have recently ridden in Cleveland, on one of the earlier roads, from twelve to eighteen miles an hour through a residential district.

Some mathematical genius could easily deduce a formula which would express the value of land in any locality in terms into which the distance in time from some important centre would enter as a principal function. For all practical purposes, other things being equal, two residential quarters equidistant in time from such a centre are of equal value. One may be two miles distant and reached by horse cars in twenty minutes, and the other three miles away and reached by an electric car in the same time, the intervals between cars being the same.

If the locality be such as to allow of expansion in all directions, then it follows that the available area of given value determined by a time limit would increase at least as the square of the schedule speed of the street-car system; and not only is the area of valuable property

thus increased, but the value of that nearer the centre is further augmented, so that the gross increase of taxable property may be increased in even a greater ratio. Suppose, on the other hand, that a town is growing up, and that its inhabitants wish to live in a less crowded condition than those in less fortunate towns, to which end they adopt a system which permits of a material increase in running speed. Then, with any increase in the speed of transit, there can be an increase in the allowable land held by an individual in the ratio of the squares, so that seven miles, as against five, in a given time, would give a man two acres instead of one. These may seem quixotic considerations, for local limitations would never permit a full realization of these benefits, but that they are to a great extent being realized is strikingly illustrated by the growth along the extended lines of the East Cleveland electric railway, where the electric system is making comfortable homes possible to those once denied them, and bringing into use lands hitherto unproductive and inaccessible.

Such have been the results of the use of electricity on street railways. There is no room for doubt as to the permanence, in some form or other, of this application. Its future will solve the problem of intermural rapid transit. Until recently, three methods have existed for handling this character of traffic: the underground shallow brick tunnel of the Metropolitan District Railway of London, the masonry viaduct of the Berlin railway, and the elevated iron bridge of the Manhattan Company of New York. Each has been operated by steam very much as trunk-line roads are operated, and each has satisfied, to a greater or less degree, the demands made upon it. None of these, however, represents the ideal method of transit in populous cities. It must be remembered that rapid-transit lines of this character are not built, nor even projected, until a city has attained a growth warranting such a system, and until the demands of the public for increased facilities have become too strong to be longer ignored. Hence the projectors of such lines have to face very important limiting conditions in determining a solution of a problem which involves the three questions of motive power, route, and construction, and in considering the further ones of legal interference with construction and the value of the enterprise from a financial point of view.

Meeting, then, with the conditions of established buildings, occupied streets, and existing lines of traffic, such a road, to be successful, must satisfy the demands of both the public and the capitalists, and it hardly need be said that the demands of the two are rarely entirely

the same. Both want the road to follow as nearly as possible existing arteries of travel, so as to be most easily accessible to the greatest number, because most convenient, and also to afford an already established patronage. To facilitate general travel, the road should make easy connections with crossing or intersecting lines of travel. It should require the least condemnation of property, avoid interference with the public right to the free occupation and use of the streets, should cause the least damage to existing systems of other corporations, and inflict the least loss upon private property during its construction or in operation. It should, furthermore, provide high express and way speeds, to do which, independent way and express tracks are necessary.

The capitalist will demand quick construction, and, as nearly as may be, a reliable estimate of cost, which is made up of a number of elements, such as preparation of way, actual construction, temporary or permanent damage to property or business, building space occupied, rolling-stock equipment, and legal expenses.

There are five general plans to which the constructors can turn. They are: an elevated steel structure; a masonry viaduct; a shallow tunnel made by excavating the streets; a closed iron tunnel, tubular or square, containing one or more tracks; and a deep rock tunnel. In order that there may be the utmost latitude for consideration of these methods of construction, it is vital that a system of motive power be adopted which is unlimited in its application and can be as freely used in a closed tunnel as on an open viaduct. Such an agent, and the only one possessing the necessary flexibility, is electricity. Hence, if it be once proven that its use capable of such development as to be able effectively to move the traffic of a large system, there is at once opened to the promoter of rapid-transit schemes possibilities not dreamed of a short time ago.

That electricity is capable of such development, all well-informed engineers and most laymen now admit. The history of its industrial application in the United States in the last few years would be sufficient proof; but for a particular application to underground tunnels, and for the successful solution of those problems relating to tunnel-construction itself, we are indebted to English engineers. Mr. Simon Sterne's happy description of the Greathead system of tunnelling, as exemplified in the City and South London road, in the FORUM for August, fully sets forth the character of this work. The result, in brief, is that the combined experiences of mechanical and electrical

engineers during the past four years have produced a result which warrants me in saying that there now exists a method of successful intermural rapid transit which can be used in any city without material interference with any existing rights, and which permits of the utmost latitude of judgment in the determination of routes. It is to be hoped that the London demonstration will make its influence felt in the decision on the plans for the construction of the new Broadway road.

Let us turn now to the needs of the suburban travellers, who are slaves to time-tables because necessity compels steam service to be conducted on present lines. Long trains hauled by high-power engines are dispatched at irregular intervals. They stand in the station, after being made up, from ten to twenty minutes. The passengers crowd the waiting rooms long before the time of departure, and often elbow and hustle each other in the strife for seats. This condition of affairs is a necessity in steam traction, because no other method of operation would be economical, but this is not the kind of service best suited for suburban travel, which ought more nearly to approach that of street-car service, of course at much higher speed; that is, the time interval of train dispatching should approximate to, or be a portion of, the average time of transit, instead of being several times that period, as in a large proportion of the present steam suburban services, especially such as is given to the people of New York. While this time interval must be necessarily influenced by the time of day, that is, by the aggregate travel, this latter element should be principally important in determining the size of the train unit. I now speak, of course, of such suburban transit as would exist where the city and suburban interests are intimately connected.

To illustrate, suppose the suburban line to be 20 miles long and to have a number of stations. The average distance of travel would be, say, 10 miles, and at 30 miles an hour the average time of transit for each passenger would be 20 minutes, with a maximum of 40 minutes. Suppose single cars to be run every 20 minutes instead of trains of four cars every 80 minutes. The former service would be far more satisfactory, even if the latter should run at a rate of 40 miles an hour, which would require, of course, more power. It is a well-known fact that the actual wear and tear in making a stop on an ordinary train often exceeds in value the tariff paid by the passengers for whom the stop is made.

Another consideration favors this method of train-dispatching. In the electric system the load would be much more evenly distributed,

and the economy of power-supply materially increased; that is, the coal expenditure per car-mile would be smallest. Such a system of small-unit operation is impossible in steam practice, because there, necessarily, the motor is a self-contained unit, and must be large enough to haul the largest combination made up behind it, so that the operation of a number of locomotives in this way offers no economical possibilities. The flexibility, however, of electric application at once removes this objection, because the electric motor may be mounted as an independent unit to haul other units, or every car may have its own motor equipment. This is, in fact, practically the method of operation in street-car service, except that the cars are generally equipped with motors which can easily haul an additional car.

There is another matter to be thought of in suburban traffic. Few people are such ardent travellers as to find pleasure in suburban transit as at present conducted. The smoke, cinders, noise, and dust all combine to make such travel anything but agreeable. Smoke and cinders affect all cars, but dust caused by the movement of a train affects the rear cars more than the forward ones. With the electric motor the troubles due to coal consumption would disappear, and with small units that due to road dust would vanish also. These considerations make travelling by a high-speed electric car exhilarating rather than fatiguing, and hence suburban life and travel will become more common and more acceptable. This class of traffic should be conducted on exclusive rails, not on those used for through trunk passenger or freight traffic. Such an independent line is illustrated by the suburban service of the Illinois Central Railroad at Chicago, where about 74 trains are operated each way in 18 hours.

We next come to an inquiry as to whether electricity will ever be used on trunk lines for heavy passenger or freight traffic. My answer is: Probably not according to our present notions of trunk-line transportation, and not by the present method of train dispatching; but, with these qualifications, I expect to see rapid transit over long distances for certain classes of service. Railway engineers are constantly meeting with a demand for more rapid and luxurious methods of transportation and greater frequency of train-dispatching. It is but fair to say that every effort which executive ability and reasonable financial expenditure warrants is made to meet this demand, and the spirit of competition is an active factor.

But the most experienced railroad men feel that the possibilities of steam practice are nearly reached—much greater speed is not practi-

cable. A maximum of 90 miles an hour, with a running speed of 60 to 70, is all that can be hoped for under the very best conditions which can be provided. The limitations are numerous, and they are well known to all engineers. Probably one of the greatest is the difficulty of making steam. Even now it requires the best work of the fireman, when his engine is pulling a heavy load, to prevent the engine's "dying" on the road, or at least falling far short of its duty.

The maximum speed of which a locomotive is capable has not been materially increased in a number of years. The schedule time has been shortened principally by cutting down grades, straightening curves, filling up ravines, and replacing wooden structures by permanent ones of iron or stone; by the use of heavy rails, safer switches, improved methods of signalling, the interlocking switch and signal system, the abolition of grade crossings; in short, by improvements in detail and management which permit a higher speed on a more extended section of road because of greater safety and the greater degree of confidence inspired in the engine-driver.

With respect to electric motors, the question is not whether a motor of sufficient capacity to pull a heavy train can be built, but rather how economically electricity can be supplied to such a motor; and this involves a question of electrical pressure. While every electrical engineer hopes to see the time when electricity will be produced directly from coal without the intervention of engines and dynamos, we are now limited to existing methods of creating the supply, and generally we have to depend upon the steam engine. It is, then, necessary for us to consider the possibilities of the amplification and development of present practice, and for this purpose I will consider the possibility of an express service between New Jersey and Philadelphia.

We will assume that a through express track is constructed, by the most direct route possible between the principal localities, with the fewest grades and easiest curves. The method of supply for such a road would be by a rod carried above the car, the return circuit being made by the rails and the earth. This system would be supplied from one or more central stations equipped with high-class triple-expansion engines, driving multipolar dynamos directly coupled. Such a station could be operated, with a fairly-uniform load, with about 1.6 pounds of coal per horse-power hour. What concerns the electrical engineer is whether the cost of copper, the electro-motive force required on the line, and the number of stations necessary, would be prohibitory.

As regards the electric potential, I think it fair to say that whatever pressure is demanded in the interest of economy will be used. Means will be found, consisting mainly in care of construction, which will make such use for the purposes intended entirely safe and proper. We have in this matter to face the same difficulties that are met in the use of high steam pressure in the locomotive or on board steamships. To accomplish the larger engineering feats necessary to meet the demands of commerce, we should be governed more by belief in our power to subordinate a good servant to our will than by fear of its vagaries in case it should be allowed to become a master.

During a period of about 13 hours, 21 regular trains leave the Jersey City station on the Pennsylvania Road to run through to Philadelphia, 12 of these making but one or two stops. In addition to the above, there are a number of local trains stopping at way stations. Taking the through trains only, and allowing an average of say five cars to a train, there would be, in the 13 hours, about 105 through cars dispatched from Jersey City, or at the rate of two cars every quarter of an hour.

For the practical purposes of this paper we will consider that the road is level—as it is—and we will increase the number of cars dispatched by one-half, so that two car units are sent out every ten minutes on a perfect block system, for which the electric application offers special advantages. Let the run be made to Philadelphia, a distance of 90 miles, at an average rate of 60 miles an hour. Slight grades would make little difference in the operation. For the overhead conductor let us take a solid copper rod, one inch in diameter, over each track, or a smaller rod if desired (the main conductors making up equal weight), and a track of equivalent capacity. This arbitrary size is taken for convenience in the present calculations, and because it falls well without the limit of expenditure which such a system would warrant.

The American Bell Telephone Company has a line of long distance wires running from New York to Boston, a distance of about 300 miles, nearly three and one half-times that which we are considering. There were, at the time when I made an investigation, about 70 wires of number-12 gauge, which would give an aggregate area, technically speaking, of 800,000 circular miles, and the total weight of copper on the line, which is used simply for telephonic communications, is about 40 per cent. more than the weight of the two-inch

rods which I propose for this railway. If the investment is allowable for a telephone system, it certainly would be allowable for the larger engineering problem which we have now under consideration.

If the car is of such a size as is used on the New York elevated roads, or on the Brooklyn Bridge, the train, with motors and passengers, would weigh about 50 tons. By electrical determinations which are perfectly simple and reliable, but into which it is unnecessary to enter at present, the electric pressure necessary to operate this system, which would have, at any one minute, 18 active units of two cars in operation, with one dynamo station in the centre of the system, would be about 3,600 volts at the points farthest from the station, and at the station itself about one-ninth higher. This is a high electrical pressure. Can we handle it on work of this character? In time, I think so, but perhaps not yet, nor is there any necessity of doing so, because by a simple process founded on known electrical laws, the electrical pressure with which we have to deal can be materially lessened. The laws which I refer to may be expressed more fully as follows:

The weight of copper necessary to transmit a given amount of power with a fixed loss will vary inversely as the square of the electrical pressure used.

The distance over which it can be transmitted with a given weight of conductor, will vary directly as this pressure.

The distance over which it can be transmitted with a conductor of a given cross section will vary directly as the square of the pressure.

The weight of copper necessary where the supplying station is in the centre of the system is only one quarter that required if the station is at one end.

The weight of copper will also vary inversely as the square of the number of supplying stations properly spaced.

From the above we see that the electrical pressure required will vary inversely as the number of stations. By arranging our machinery so that, instead of making both overhead conductors of like potential (that is, forming one side of the circuit, while the track furnishes the other) we arrange them so as to form a three-wire circuit (that is, make the two overhead conductors the positive and negative terminals of dynamos coupled in series of two, with the track a compensating conductor, negative to one overhead line and positive to the other) we halve the potential which exists between the overhead conductor and track, and by applying the laws which I have enunciated we would get a table as follows:

Stations.		Motor Potential.	
Number.	Miles Apart.	2-Wire.	3-Wire.
1	—	3516	1808
2	45	1808	904
3	30	1205	603
4	22½	904	452

It will be noticed that in the last example given there are four stations, 22½ miles apart, and the three-wire system with compensating rail is used. The electrical pressure is that which at present distinguishes our street service, but this is far lower than it is necessary for work of this kind to go, and we could easily assume the second instance given—that of two stations 45 miles apart—requiring under the three-wire system about 900 volts. It will be noticed that I have made conditions of this operation, distributed work and the dispatching of units at short intervals. These conditions are absolutely necessary if we are to consider long-distance transportation by electricity. They are such as characterize in some degree elevated railroad operation, and should hold also in suburban traffic.

The operation, from a fixed station, of large units over long distances, at irregular and long intervals, is not feasible, although possible; and, after all, the commercial question is the arbiter.

Such a service as I have outlined is not only possible, but will soon be practicable, and it would revolutionize travel.

Frank J. Sprague.

ACCIDENTS AND ACCIDENT INSURANCE.

THE whole story of the progress of the human race is the record of a struggle to increase comfort, and to limit the consequences of misfortune or disaster, by some form of combination. This progress has often been delayed, interfered with, and even thwarted for a time, as greed and selfishness have for a brief period gained control, and short-sighted avarice has diverted to private profit the advantages that belonged to the whole body politic. But in spite of the outbursts of discontent which have from time to time shaken society, as one class or portion of the public has seen that it was getting less than its share of the increasing advantages which the years have brought, the general movement has been progressive; mankind has come closer and closer together, and the community of interests has grown, until many a disaster, which falling upon an individual would have crushed him to earth, is scarcely felt to be an annoyance when the many share it. Wherever a large number of individuals are alike exposed to danger of loss that can be measured in dollars and cents, there is an opportunity for the practical application of the form of this principle which we call insurance, for insurance is the sharing by the many of the loss which may occur at any moment to any one, and which must occur to some.

Yet the growth of insurance was very slow in spite of the fact that there was a kind of marine insurance in vogue among the Greeks and Romans from very early ages. In 1435 the magistrates of Barcelona passed an ordinance regulating marine insurance, which seems to have been then firmly established in very much its present form. From marine to fire insurance was the next natural step, though it was not taken until about two centuries later. If a number of merchants find it to their advantage to agree to share the loss which disaster at sea may bring to any one of them, several householders can as profitably unite in bearing the losses which a conflagration may inflict upon any of them. Early in the seventeenth century we find the first instances of fire underwriters, and the first regular fire-insurance office was opened in the city of London in 1681. Almost at the same time men began to reason that the same principle could be wisely and prof-

itably extended to the insurance of human lives; that every man's life has, or should have, a money value which may be insured in the same way as his house or his ship.

At first private individuals insured lives only for short, definite periods to cover exceptional hazards. In 1706 the first office for writing insurance on lives was opened in London, and twenty-eight years later was issued the first policy that promised a definite sum at death, whenever that might occur. During the next half century all kinds of wild and impracticable schemes were devised and put in operation under the name of insurance. One office was organized to insure against lying, and other insurance offices took all kinds of risks if only large enough premiums were offered. Risks were taken on the reduction of a foreign city in a given time, on the retention of a ministry in power, and on the results of criminal trials.

By 1760, however, the evils of this extravagance began to be recognized; the distinction between gambling and insurance was becoming clear to thinking men, who, recognizing the value of the one and the demoralizing effect of the other, brought about in England salutary legislation, establishing for all time the true principle that insurance can exist only when one is seeking to provide indemnity for a possible loss at least as great as the indemnity sought.

All men are exposed to accident, and the risk for professional and business men varies but slightly, while those engaged in more hazardous occupations are easily arranged in classes of a like degree of risk. The loss which threatens all, and which must befall some, is in one aspect a loss which can be measured in terms of dollars and cents. If only a large enough number of individuals of similar occupations be taken under similar conditions, the number of accidents which will occur in a given time is as easily calculable as the number of deaths per thousand, or the number of times that aces will come up in 10,000 throws of the dice.

It is a great wonder, in fact, that accident insurance in its present form was not sooner thought of, and that it has not a history of three or four hundred years, instead of less than fifty. Especially is this a matter of wonder, when we find that as early as 1541, merchants did sometimes insure the lives of the masters of their vessels against disaster at sea—a hint as to the possibilities of accident insurance which would certainly have borne fruit had the world been ripe for it. But the fact steadily won recognition that a prudent foresight involving careful attention to every possible contingency is an essential condi-

tion to business success, and that a failure to exercise such foresight, by one upon whom others are dependent, is criminal neglect. Men had learned to consider that a man lacked ordinary business prudence who was ruined, when house or property was swept away in flames, because he had neglected by fire insurance to divide the loss with so large a number of others as to make its burden more easily borne. And when men learned that disabling or fatal accidents are more than forty times as likely to befall them as fire is to destroy their buildings, they could not escape the conclusion that accident insurance is a necessity for the prudent; and the world was growing prudent.

The first accident-insurance company was organized in London, in 1845, to insure against railway accidents. Before the end of 1850, ten other companies were organized for the same purpose, but several of them soon ceased to exist. In 1849 the first general accident company was organized. This also was in London. It was the original intention of those having the project in hand to give insurance only against fatal injuries; but in 1850, before the company began to do business, its scope was enlarged, and its managers arranged to give weekly indemnity for disabling accidents, as well as indemnity for death by accident. In 1864 the first accident-insurance company in this country began its career, and continued to have a monopoly of the business, in spite of many efforts to organize competing companies, until 1877. Since that time accident insurance has steadily grown in popularity with the American public. A little more than three years ago the scope of accident insurance was enlarged. Until that time indemnity had been paid only when accidents resulted fatally, or for a limited number of weeks, not exceeding twenty-six, for totally-disabling injury. But an accident often leaves the victim permanently disabled, blind, or maimed, and the payment of a weekly indemnity for even a year is but a very partial reimbursement for the loss of earning power. A somewhat arbitrary list of indemnities for such misfortunes was devised and put into practice. The more common form of policy in "preferred" classes, that is, classes composed of professional and business men, was for $5,000 in case of death by accident, with twenty-five dollars weekly indemnity in case of disabling injury. The holder of such a policy in any of the better accident companies finds himself, under this new arrangement, entitled to additional benefits about as follows: For an injury permanently disabling him from attending to business he is entitled to $2,500; for the loss of two limbs, $5,000; for the loss of the right hand or of

either foot, $2,500; for the loss of the left hand, $1,250; for the loss of one eye, $650; for the entire loss of sight, $5,000.

It is interesting to compare these figures with the rates of indemnity offered to the soldiers of Holland by the government during the war with England in 1665. These rates were: For the loss of both eyes, $315; one eye, $73; both arms, $315; right arm, $94; left arm, $75; both hands, $250; right hand, $73; left hand, $63; both legs, $147; one leg, $73; both feet, $94; one foot, $43. These rates were, so far as we know, the results of the first attempt to determine the value of the different members of the human body. Either such value has largely increased since that time, or the accident companies of to-day are inclined to pay more liberally than the republic of the United Netherlands.

The curious facts about accidents that have been classified from the experience of accident-insurance companies in many ways throw an interesting light on human nature and the habits of men. For instance, nineteen twentieths of all the accidents that occur to professional and business men are in no way connected with their occupations, but are such as all men are exposed to. Men of these classes are, of course, "preferred risks" in accident-insurance parlance. The "ordinary risks" include civil engineers, field surveyors, supervising architects, and others whose occupations are a trifle more hazardous than the "preferred." The "extra-hazardous risks" are such as buzz-sawyers, freight-train brakemen, miners, and electric-light workmen. A commentary on human nature is afforded by the fact that every man depreciates the risk of his peculiar calling. The car-coupler, the laborer on a construction train, or the electric-light lineman, is perfectly sure that there is no occupation safer than the one in which he is engaged. There are certain classes engaged in occupations so dangerous that no accident-insurance company can afford to insure them. The professional acrobat, the professional base-ball player, the circus rider, and the aëronaut cannot secure insurance. In only one form of accident insurance is no discrimination made as to occupation. The accident ticket, covering accident insurance for one day at a time, is sold at a rate so high that the companies issuing it can afford to give insurance even to the most hazardous of occupations. Twenty-five cents a day seems a small sum, but it is equivalent to $91.25 a year for $3,000 accident insurance.

There is a popular impression that accidents tend to occur in groups as regards both time and place—an impression that is to a cer-

tain degree justified by observation. The accidents that do so occur, are, however, almost always the results of neglect or carelessness. We read in the spring of the year of the derailing of a train by the spreading of the rails, and before the news is old another similar accident is reported. The careful observer might have predicted a group of such accidents before the first occurred. The frost had just left the ground, and the railroad companies in the less thickly settled portions of the country had not yet made their lines safe for the season. Thus, before the first accident had time to work its result in increased precautions, it was followed by others.

To the question as to when, where, and how accidents occur, the only general answer that can be given is: When they are least expected. The commercial traveller who insures because he is exposed to danger while on the rail, draws indemnity for an injury received while winding a clock. The dentist who endeavors to protect himself against possible personal injury while using his tools, is disabled by a cinder in his eye. It is to be noted, however, that more accidents in proportion to population occur in the South, the Southwest, and the West than in the northern, the middle, and the eastern States. The older and more closely-settled portions of the country are the safer ones. As to times and seasons, mid-winter, with its icy sidewalks, and mid-summer, with its great variety of outdoor occupations, are especially prolific of accidents. The most common form of accident is a fall. During the year ending April 20, 1891, there were reported at police headquarters in the city of New York, 5,223 accidents resulting in serious or fatal injuries; and 3,086 of these were the results of falls. Of 12,422 claims paid by one accident company, 4,814 were for injuries received from falls.

The statistics of one large company show that one is two-and-a-half times as likely to meet with a fatal accident as to lose limb or sight accidentally; that one is as likely to lose an eye as a foot, and two-thirds as likely to lose an eye as a hand. These results are not surprising, but it is difficult to understand why one is eighteen times as likely to lose the left hand as the right hand, and more than five times as likely to lose the left foot as the right.

The extent to which public attention has been directed to accidents is shown by the fact that during the year 1890 more than $3,300,000 was paid by accident-insurance companies in the United States to those who had met with disabling accidents, or to the beneficiaries of those who had met with fatal accidents.

Though accident insurance had to wait for the growth of a spirit of prudent foresight in the world, it has, in the fifty years of its existence, done much to develop such a spirit. The mere existence of corporations organized for such a purpose keeps before the public the necessity of some provision against casualties; and a provision against one form of possible future misfortunes naturally tends to make the insurer more thoughtful of the future in other directions. Evidence of this effect of accident insurance finds abundant testimony in the observations of all those who are conversant with the business. The mere fact of carrying accident insurance makes the holder of the policy less likely to meet with an accident. Nor is this, as has sometimes been supposed, a mere superstition. It is what might be expected. A certain proportion, and quite a large proportion, of accidents result from the carelessness of the victims. If in any way the attention of a man be called beforehand to the liability of the accident, by that very fact an accident is less likely to happen. And the possession of an accident policy, the paying for protection against accidental injury, must call attention to its possibility and lessen its probability.

Accident insurance, which thus so educates the public as to lessen the liability of accident through one's own carelessness, may in time, in the same way, lessen the frequency of those accidents that happen through the carelessness of others; but even when both these classes of accidents cease, there will remain still other chances for disaster; for we are exposed to-day to very many forms of accident unknown to our fathers. The first accident-insurance company was organized less than fifty years ago, to meet the new danger of accident which had come with the introduction of the railroad. Now the various and continually multiplying uses of steam and of electricity are surrounding us with a thousand dangers which not only were unknown to our fathers, but which were strange to the boyhood and to the early manhood of those who have hardly reached middle age.

But accident insurance does more than simply to distribute the loss resulting from calamities. It is no mean factor among the actual productive agencies of the age. In this day of sharp competition, of rivalry between keen business men, the man who is to prove himself able to do something for the world must be as free as possible from everything that hinders the free exercise of every faculty. Every possible annoyance, every haunting doubt about his own future or the future of those dependent upon him, lessens his ability to do his work,

and increases the chance of failure. Accident insurance has done and is doing for thousands to-day just what no other agency could accomplish in this respect, and is thus making the work of men more successful for themselves and more valuable for the world; and its growth shows that it is yet only in its infancy. One of the distinguishing characteristics of modern business life is the necessity of certainty in calculations about the future. The man of affairs plans his various business operations as a general plans the movements of an army. He must know exactly what he will be doing at any given place and time, in order that his whole plan may not come to failure through some unforeseen contingency. There must be no unforeseen contingency.

JAMES R. PITCHER.

WRITERS AND SUBJECTS IN THE SEPTEMBER FORUM.

An American Boys' School—What it Should Be. THE REV. DR. HENRY A. COIT, Rector of St. Paul's School, Concord, N. H.—The proper co-ordination of the forces and influences that go to the ideal training of a lad, sound in body and in mind.

The Rev. Dr. Henry Augustus Coit (born January 20, 1831) was educated at College Point, N. Y., and at the University of Pennsylvania. In 1856, he was chosen rector of the famous St. Paul's School for Boys at Concord, N. H., a post that he has held ever since. He has published many sermons and addresses, and recently a volume of Reminiscences, chiefly of men who were trained at St. Paul's School.

Ideals of the New American University. PRESIDENT DAVID STARR JORDAN, of the new Leland Stanford, Jr., University, California.—The opportunity to establish an American university unhampered by traditions; what are the essentials of a real university; and what are traditional hindrances and superfluities.

President David Starr Jordan was born at Gainesville, N.Y., January 19, 1851; he was graduated at Cornell University in 1872, and at the Indiana Medical College in 1875. In 1879 he became Professor of Biology in The Indiana University of which he was subsequently chosen President. He resigned in 1890 to accept the presidency of the newly-founded Leland Stanford, Jr., University in California. He has written much on natural history and is the author of a "Manual of the Vertebrates of the Northern United States" (1876).

Technological Education in the United States. PROF. H. W. TYLER, of the Massachusetts Institute of Technology.—A review of the growth and usefulness of scientific and industrial schools and their effect on our educational development.

Professor Henry W. Tyler was born at Ipswich, Mass., April 16, 1863, and was graduated at the Massachusetts Institute of Technology, Boston, in 1884, and at Erlangen, Bavaria, in 1889. Since that year he has been an instructor in the Massachusetts Institute of Technology, and in 1890 he was made assistant professor of mathematics.

A Review of the Higher Education of Women. ALICE FREEMAN PALMER, lately president of Wellesley College.—The record, so far, of the co-educational colleges, of the women's colleges, and of the women's "annexes" to universities.

Mrs. Alice Freeman Palmer was born at Colesville, Broome Co., N. Y., February 21, 1855; she was graduated at the University of Michigan in 1876. In 1879 she became professor of history at Wellesley College, and in 1882 she was chosen president of that institution. She held this post until 1888, when she resigned and was married to Prof. Palmer, of Harvard University. Mrs. Palmer is a member of the Massachusetts Board of Education, and she has written and lectured often on educational subjects.

Physical Hindrances to Teaching Girls. MISS CHARLOTTE W. PORTER, Principal of "The Elms" school for girls, Springfield, Mass.—The serious difficulties that the social life and habits of rich girls present to the teacher; the remedy.

Miss Charlotte W. Porter, who is a great-granddaughter of Jonathan Edwards, was born in Old Hadly, Mass., in 1840. She was educated at Hopkins Academy, Hadly, Mass., and at Farmington, Mass. In 1866 she began to teach girls at Hadly, and she removed her school to Springfield in 1881.

The Farmer's Isolation and the Remedy. JOHN W. BOOKWALTER.—What coöperation might do; a description of Western farm-life, with reminiscenses; an analysis and a remedy.

Mr. John W. Bookwalter was born in Indiana and lived on a farm till his twenty-third year, when he removed to Springfield, Ohio, and engaged with James Leffel in the manufacture of turbine water-wheels and became a large manufacturer of machinery. Mr. Bookwalter has long been a thorough student of economics, especially of the production and distribution of food products; and he has written much for economic journals both American and European.

The Growth and Triumph of Wagnerism. HENRY T. FINCK.—The increase of Wagner performances in every cultivated country; a financial as well as an artistic measure of triumph.

Henry Theophilus Finck was born in Bethel, Shelby Co., Maine, September 22, 1854; he was graduated at Harvard University in 1876; and after studying in Germany he devoted himself to journalism in New York, chiefly as musical critic on the staff of *The Evening Post*. He has been one of the chief champions of Wagner in this country. Mr. Finck is the author of "Romantic Love and Personal Beauty," "Wagner and Other Musicians," etc., etc.

Authors' Complaints and Publishers' Profits. GEORGE HAVEN PUTNAM.—The details of publishing arrangements; what a fair division is of risks and of profits.

Mr. George Haven Putnam was born in London, April 2, 1844. He was educated at Columbia College, New York, and at Göttingen. After service in the Civil War he became a publisher in New York, and he is now at the head of the firm of Messrs. G. P. Putnam's Sons, which was founded by his father. He has been an active advocate of international copyright, and has written much on this and kindred subjects. He is the author of "Authors and Publishers" (1882) and of "The Question of Copyright" (1891).

The Government of the United States in Account With the Taxpayers. EDWARD ATKINSON.—A simplification of the table of receipts and expenses of the Government; how the income from the taxes on tobacco and spirits meets the whole normal expense of the Government.

Mr. Edward Atkinson, one of our most voluminous and most widely-read writers on a wide range of economic topics, was born in Brookline, Mass., February 10, 1827. He is President of the Boston Manufacturers' Mutual Fire Insurance Company, which wrought a revolution in the construction and security of manufacturing buildings; and he is the inventor of the "Aladdin Oven." His numerous works include "The Collection of Revenue;" "The Railroads of the United States;" "The Railway and the Farmer;" and "The Distribution of Profits."

The Political Issues of 1892. THE HON. HENRY CABOT LODGE.—Why free silver and not the tariff will be the main issue.

MR. HENRY CABOT LODGE was born in Boston, May 12, 1850; he was graduated at Harvard University in 1871, and at the Harvard Law School in 1874. He was the editor of *The North American Review* from 1873 to 1876, and of *The International Review* from 1879 to 1881. Thereafter his political career was begun. He served two terms in the General Court of Massachusetts, was Chairman of the State Republican Committee; and since 1885 he has been a member of Congress. He is the author of numerous historical works, including a "Short History of the English Colonies in America;" biographies of Webster and Hamilton; "Studies in History," and a volume on "Boston" in the "Historic Towns" series.

The Recent Growth of Industrial Capitalization. J. SELWIN TAIT.—The advantages of industrial securities, both to owners and to investors; how well some recent "industrials" have paid; a new field for financial activity.

MR. J. SELWIN TAIT is a native of Langholm, Scotland. He received his banking education in the office of the British Linen Company Bank, was for many years a manager of the London and South-western Bank, in London, and is now a partner in the banking house of Donnell, Lawson & Company, of New York. Mr. Tait is the author of "The Cattle Fields of the Far West," "National Banks and Government Circulation," and numerous essays on banking subjects.

The Future of the Electric Railway. FRANK J. SPRAGUE.—How the electric motor is solving the problem of city and suburban rapid-transit, and may solve the problem of fast long distance travel also.

MR. FRANK J. SPRAGUE was born in Milford, Conn., on July 25, 1857, and was graduated at the United States Naval Academy, in 1878. In 1882, his report to the Navy Department on the London Electrical Exhibition gave him a wide reputation. He resigned from the navy in 1884 and has since given his time to the work of electrical engineering. He was general manager of the Sprague Electric Railway and Motor Company, until its absorption by the Edison Company in 1890, and he is now president of the Greathead Subway and Tunnel Company.

Accidents and Accident Insurance. JAMES R. PITCHER, Secretary of the Mutual Accident Association.—Curious facts regarding accidents; an historical sketch of accident-insurance.

MR. JAMES R. PITCHER was born in Windham, Green Co., N. Y., in 1845. He organized in 1877 the United States Mutual Accident Association in New York City, the first mutual accident association, and he has since been its secretary and general manager. He has contributed to current literature on insurance and horticulture.

BOOK LIST.

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